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ABSTRACT

This resource guide provides educational agencies involved in vocational education in Hawaii with timely and relevant information for program planning and the establishment of priorities. After prefatory material, Section II looks at conceptual and procedural considerations in planning, focusing on twelve generic steps in planning and describing planning and decision-making strategies, such as the Delphi and Delbecq Techniques. This section concludes with a selected bibliography on planning. Section III offers occupational projections for Hawaii, relating employment opportunities to vocational education programs. Section IV provides a table illustrating population factors, such as age and sex distribution, persons with special educational needs, immigration projections, income, and employment. Additional tables are provided in Section V covering enrollment projections for secondary and postsecondary vocational education programs. After Section VI presents a map of Hawaii, Section VII lists program offerings by high school and community college. Section VIII summarizes and explains federal and state funding budgets for 1980-81 and 1981-82 for vocational education. Section IX discusses enrollment status by sex, while Section X presents graphs and tables covering sex and ethnic distributions at selected colleges and schools. Finally, Section XI lists in-service activities sponsored by the Department of Education, community colleges, and the University of Hawaii's College of Education. (AYC)

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Office of the State Director for
VOCATIONAL EDUCATION

# PLANNING RESOURCE

AUGUST, 1981

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TABLE OF CONTENTS


| Section | | Page |
|---|---|---|
| 1.0 | Preface | 5 |
| 2.0 | Conceptual and Procedural Considerations in Planning | 6 |
| 3.0 | Hawaii Occupational Projections | 16 |
| | 3.1 Employment Opportunities Related to Vocational Education Programs: Labor Supply and Demand Summary | 20 |
| | 3.2 Employment Opportunities Related to Vocational Education Programs: Labor Supply and Demand Detail | 23 |
| 4.0 | Population Factors Relative to Vocational Education Planning | 26 |
| | 4.1 Population | 26 |
| | 4.2 Persons with Special Needs | 27 |
| | 4.3 Income | 28 |
| | 4.4 Employment | 29 |
| 5.0 | Enrollment Projections for Secondary and Postsecondary Levels: FY 1983 - FY 1987 | 31 |
| | Projected 5-Year Vocational Education Enrollment by Program: Secondary | 32 |
| | Projected 5-Year Vocational Education Enrollment by Program: Postsecondary | 34 |
| 6.0 | Map of Hawaii | 35 |
| 7.0 | Vocational Education Program Offerings | 37 |
| | Program Offerings by High Schools | |
| | Program Offerings by Community Colleges | 49 |
| 8.0 | Budget Summary Explanation | 54 |
| | Summary of Federal and State Funds for Vocational Education 1980-81 | 55 |
| | Summary of Federal and State Funds for Vocational Education 1981-82 | 56 |
| 9.0 | Status of Enrollment by Sex Characteristic | 57 |
| 10.0 | O.C.R. Review of Selected Schools and Colleges for 1980-81: Distribution of Sex and Ethnic Populations | 61 |
| 11.0 | In-service Activities | 62 |
| | 11.1 Department of Education | 62 |
| | 11.2 Community Colleges | 64 |
| | 11.3 College of Education | 65 |

## PREFACE

In this period of uncertainty and seemingly continuous threat to cutback federal funds for vocational education, it is imperative that management improvement strategies be developed. The escalating costs of operating programs compound the problem of reduced funding support and it would seem inevitable that Congress and the Administration will be focusing on cost benefit studies and greater accountability measures. One thing is certain, change is in the air.

One of the basic means for effective planning and decision making is the acquisition and use of management information. This booklet represents the continuous efforts of the Office of the State Director for Vocational Education to provide to the educational agencies timely and relevant information for planning and establishing priorities. Specifically, the operating agencies would be able to conduct analyses to support management decisions through the identification of needs, opportunities, and problems.

It must be recognized that uncertainty about the future, the unavailability of certain kinds of data, and the need to operate within the cost-benefit concept may cause the data base and techniques to fall short of a desired level of sophistication and accuracy. However, the consensus among educational decision makers indicates that gains derived from planning based on systematic labor and supply forecasts exceed those derived from planning in the absence of forecasting.

Effective occupational program planning involves identifying the target populations to be served and establishing priorities; determining the appropriate packaging, mix, and sequence of services to be provided to the target groups; and selecting the most cost-effective delivery system. The successful orchestration of the above considerations will result in minimizing fragmented, duplicative, and competing programs.

It is our sincere hope that the educational agencies will use this resource guide to provide the range of services for all groups according to the varying needs of each. Moreover, we welcome helpful suggestions for improving this resource guide.

SAMSON S. SHIGETOMI
State Director for
Vocational Education

# CONCEPTUAL AND PROCEDURAL CONSIDERATIONS IN PLANNING

## Introduction

The normative literature on planning and decision-making theory is extensive. Some analysts feel that Gulick and Urwick's POSDCORB and other such pioneering efforts have provided conceptual mechanisms to more effectively study the planning and administrative processes. More recently, such techniques as PPBS, PME, and zero-based budgeting have been heralded by normative theorists as strategies and devices whereby even those with limited experience can develop viable and workable plans for effectively achieving organizational objectives. Other students of administration claim that normative theorists, with their prescriptive management strategies, have simply been advocating the use of common sense. Such critics look with suspicion at consultants who claim to be able to transform journeyperson administrators into erudite planners in the space of a weekend workshop.

What both proponents and critics of normative planning strategies would tend to agree upon is that good planning should, to the extent possible, be an overt process. Walt Disney may have been a great planner, but he never explained the method whereby he worked his particular genius. After the founder's death, Walt Disney Productions suffered dearly from Mr. Disney's secretive mode of planning and veiled techniques of operation's control.

Essentially, planning ought to be a rational and sequential process. It should also be an outcome and not a process oriented procedure. Good planning should seek to anticipate the total ramifications of a given plan of action. Had Dwight Eisenhower projected the long term ramifications that construction of the interstate freeway system, which made the country heavily dependent on the gasoline powered automobile, the U.S. might not be as dependent on foreign oil as it is today.

## Generic Aspects of Planning

The nature and purpose of an organization can, and usually does, influence the particular configuration of a planning process. The planning mechanism for a crisis center will necessarily vary from that of a metropolitan transit system. In one case, uncertainty is a given, and in the other, basic regularities can be identified and trends analyzed. However, there are certain generic steps that all planners should incorporate in their planning strategy. These are as follows:

I. Define the problem to be solved. Reduce and delimit it to its essential elements.

II. Identify possible alternative solutions in terms of costs to be incurred and benefits to be derived.

III. Analyze the probable reaction of all groups involved or affected by whatever plan of operation that may emerge. These groups or individuals are referred to, by some planning consultants, as "stake holders." A stake holder is anyone who will be affected favorably or adversely by the implementation of a plan. Planning specialists recommend that each stake holder should be evaluated in terms of:

1. The relative importance of the plan's implementation to that individual or group.

2. The relative ability of the individual or group to influence, either favorably or adversely, the implementation of any possible problem solving technique or plan.

The position of the stake holder can also be analyzed using the following taxonomy:

| Analytical Factors | Stake Holder: _____ | Internal Environment | External Environment |
|---|---|---|---|
| Organizational Considerations | Benefits to be Derived | | |
| | Disadvantages Entailed | | |
| Power Considerations | Strengths | | |
| | Weaknesses | | |

IV. Analyze the environment in terms of relevant criteria. Factors to be considered include:

| Variables | Timeframe: 1 Year | 2-Year (biennium) | 6-Year (PPBS Cycle) |
|---|---|---|---|
| Political | | | |
| Economic | | | |
| Social | | | |
| Technological | | | |

V. Redefine and clarify the problem on the basis of preliminary analyses.

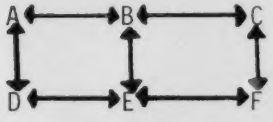
VI. Develop informal, schematic portrayals of possible patterns of interaction and impact between stake holders as part of the brainstorming process.

VII. Make overt the the decision-making process involved in the planning. There are various kinds of decision-making strategies. One way of conceptualizing these basic approaches is as follows:

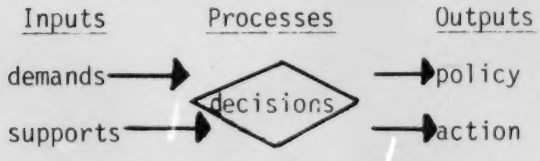
•linear: one action follows logically from another in a linear pattern.

A ⟶ B ⟶ C ⟶ Solution

•rectangular: actions are perceived as being multi-dimensional in nature. That is, no action has a clear beginning and ending and once implemented has a continuing, if diminishing, residual.

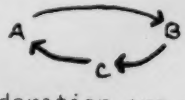



•systems: the situation is conceptually treated as one having inputs, processes, and outputs

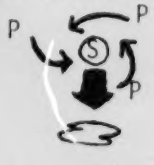



There are three other reasoning styles that behaviorists have identified in descriptive analyses or organizational planning. However, these are inappropriate for consideration in a normative, logical-positivist approach. These are:

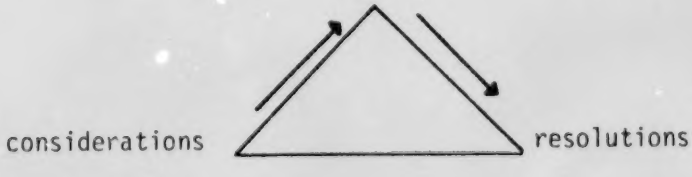
•circular: similar to the dialectic with few efforts made to anchor the process or evoke cloture.




•star system: all consideration are gradually reshaped to satisfy the apparent preferences and biases of those generally perceived as being the most influential and powerful in the decision-making group.




•pyramidal: All information flows up from the bottom to top; all decision increments flow from the top to the bottom.



VIII. Once the reasoning process has been determined, choose the criterion to be employed in making decisions. The major options are:

- optimizing: using this criterion you attempt to move the system as far as possible toward the realization of the organizational objective, even at the cost of antagonizing stake holders inside and outside the system.

- satisficing: using this as your criterion you attempt to satisfy as many stake holders as possible. Most groups, particularly the strongest, get something via the solution; but no one gets everything.

- incrementalism: using this approach you simply attempt to modify or amplify on that which the organization is already doing. This approach characterizes the planning process in vocational education in many states.

IX. Plot the implementation of the successive components of the plan. You may choose to use PERT or GANTT techniques for this. Other variants are available. You may wish to develop your own to meet the particular needs of the organization. However, the basic elements of the GANTT and PERT procedures are relatively simple to understand and use.

a. PERT

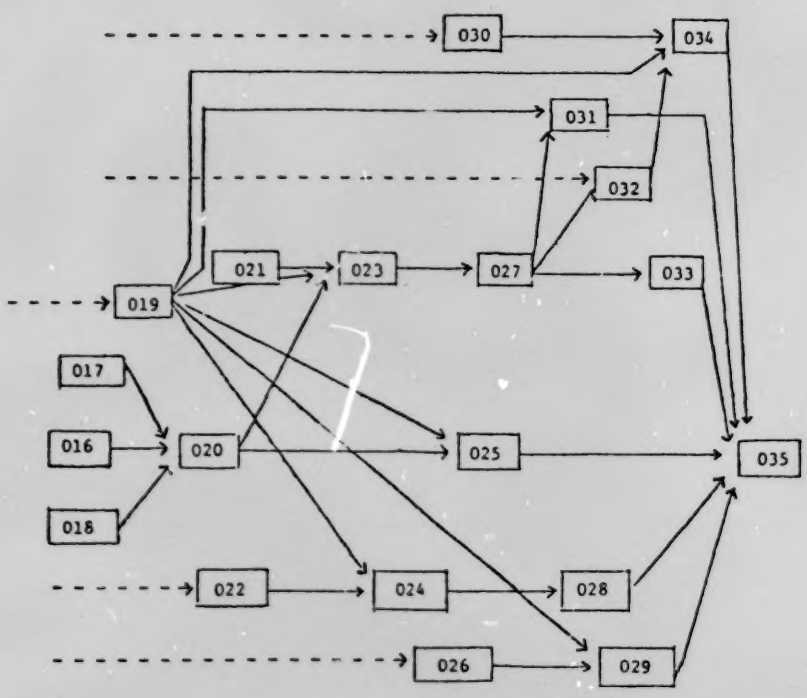
The acronym PERT refers to "Program Evaluation Review Technique." It was used and refined during the Navy's Polaris developmental program. This complex undertaking involved 250 prime contractors and over 9,000 subcontractors.

PERT involves three essential requirements. These are: (1) every significant activity, that must take place before a project is completed, is described in succinct but specific terms; (2) the sequence of activities and the relationship of activities are depicted by means of the PERT network or schemata and (3) the timeframe is clearly specified for each activity.

Some planners use three different estimates or planning scenarios: the most pessimistic, the most optimistic and the most likely.

One variant or supplement to PERT is PERT/cost. In this schematic the dollars estimates for each project component are depicted. This facilitates decision-making based on such factors as cost, time, and benefits.

Pert Schedule For A Secondary School's
Building Construction Project




Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May

Code

016 excavation design completed

017 masonary operations design completed

018 concrete poured

019 materials begin to arrive

020 foundation completed

021 framing requirements determined

022 plumbing requirements determined

023 carpentry work initiated

024 plumbing work initiated

025 masonry work completed

026 electrical requirements determined

027 framing completed

028 plumbing completed

029 wiring completed

030 painting begins

031 roofing undertaken, completed

032 drywall installed

033 carpentry work completed

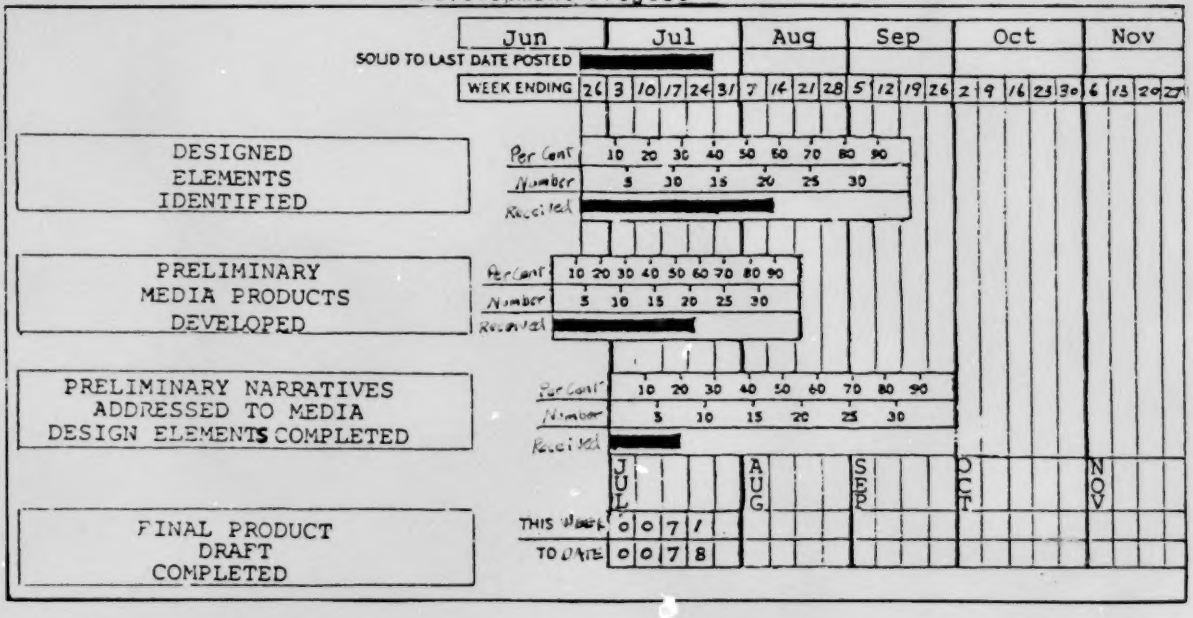
034 painting completed

035 building project completed

b. GANTT

The GANTT chart is one fairly effective method for depicting that which is to be accompanied and assuring a mechanism of control during the implementation phase. It shows at a glance which parts of a job are behind schedule and makes it possible to recommend remedial action before delays become serious.

Gantt Chart For A Curriculum Development Project


Jun
Jul
Aug
Sep
Oct
Nov
SOLID TO LAST DATE POSTED
WEEK ENDING 26 3 10 17 24 31 7 14 21 28 5 12 19 26 2 9 16 23 30 6 13 20 27
DESIGNED ELEMENTS IDENTIFIED
Per Cent 10 20 30 40 50 60 70 80 90
Number 5 10 15 20 25 30
Received
PRELIMINARY MEDIA PRODUCTS DEVELOPED
Per Cent 10 20 30 40 50 60 70 80 90
Number 5 10 15 20 25 30
Received
PRELIMINARY NARRATIVES ADDRESSED TO MEDIA DESIGN ELEMENTS COMPLETED
Per Cent 10 20 30 40 50 60 70 80 90
Number 5 10 15 20 25 30
Received
JUL
AUG
SEP
OCT
NOV
FINAL PRODUCT DRAFT COMPLETED
THIS WEEK 0 0 7 1
TO DATE 0 0 7 8

X. Continue to modify your projections of the future during implementation process by:

- analyzing program trends,
- studying shifts in demographic data organized by relevant criteria,
- soliciting established expertise,
- using educated best guesses, and
- implementing sequential analyses.

XI. Be continually aware of the "zeitgeist" or "timing" of each implementation step as the plan evolves. This is critical. The right move at the wrong time could prove fatal to the successful implementation of your plan of action.

XII. Modify the plan during implementation and after the proposed solution is fully operational through the use of information feedback.

## Planning and Decision-making Strategies

As is probably obvious, the critical element of the planning process is the creative phase, whereby various alternatives are identified and examined. This calls for creativity, and creativity is one commodity that most organizations generally find in short supply.

The identification of alternatives usually takes place through a process popularly referred to as "brainstorming." Some organizations actually set-aside a portion of their administrative offices for this process. Such quarters are frequently referred to as "think tanks."

Brainstorming is usually a collective enterprise. Operating on the assumption, which is open to question, that many minds are invariably better than one, administrators and planners meet and throw out ideas for consideration by the group as they occur. One disadvantage of this approach is that the more junior, and usually younger members, tend to become intimidated in the process by their superiors and the senior staff. Any proposal, which by implication, suggests the inadequacy of existing policy and/or procedures to meet an organizational challange is understandably treated with suspicion by those responsible for the status quo.

Two techniques have been developed to facilitate the development of ideas and planning proposals. One is better than the other. The better of the two is known as the Delphi Technique.

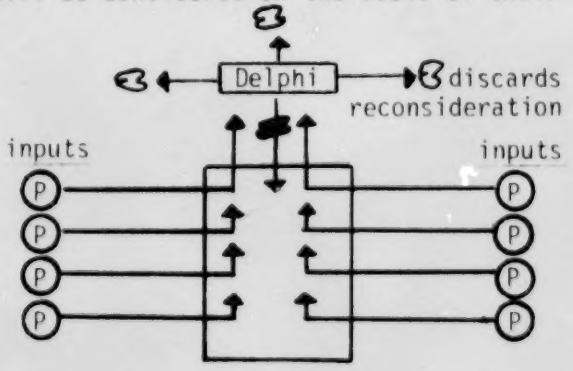
### •Delphi Technique

In ancient Greece, the Oracle at Delphi was a revered source of authority to which individuals, groups, and states often referred their problems. The Oracle was believed to be ascribed with great wisdom and insight.

In the Delphi system, (there are several variants) each participant in the planning group prepares a proposed plan or scenario for the Delphi to consider. The submission is coded to protect the participants' anonymity.

The Delphi which may be composed of one or more individuals have established expertise, selects those proposals having the best chance of achieving the objectives as stated, and then resubmits those proposals deemed most acceptable to the planning participants for further consideration and refinement.* The process is repeated until a plan emerges which is sufficiently holistic and detailed to allow a discussion of operational considerations.

In this system the Delphi is the key. It is the Delphi who evokes cloture on any given option or component of a plan. Anonymity guarantees that all participants' ideas will be considered on the basis of their innate merit and their merit alone.



*Delbecq Technique

This approach places a premium on consensus building. In its conceptual rationale there are shades of Rousseau's "general will" and Calhoun's "concurrent majorities." The technique is very similar to that employed by Japanese multi-national corporations.

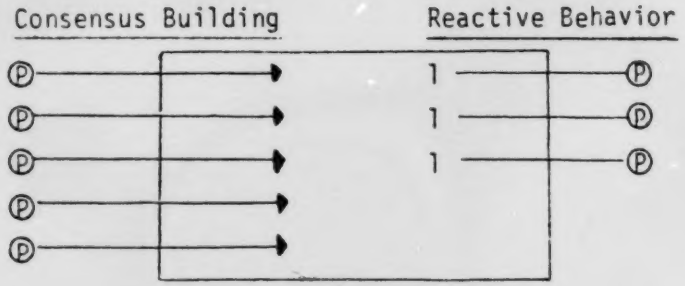
In this technique (there are also many variants of this strategy as well), the planning participants are encouraged to develop one or more proposals to solve some problem or to take advantage of a unique opportunity. The proposals are then circulated to the group as a whole and a general discussion ensues. The proposals are evaluated in terms of:

need - the professional community's interpretation of that which would be preferable.

demand - the layman's interpretation of that which would be preferable.

Within a short period of time, majority sentiment usually (sometimes it is only a plurality) emerges in favor of one of the options. It is the role of the majority to convince the others that the option, which the greatest number have initially selected, be the choice of the entire group. They may make minor compromises to achieve the desired consensus. If consensus cannot be obtained, the option under consideration is discarded and the process is repeated.

Consensus is considered vital. All members must be on record as favoring the selected plan. Otherwise, it is reasoned, they will not work enthusiastically for its successful implementation.




*In some situations (e.g. engineering) the Delphi may be computer or be assisted by a computer.

A Partial and Select
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## HAWAII OCCUPATIONAL EMPLOYMENT PROJECTIONS

### Method

The Hawaii occupational employment projections forecast is based on the "Tomorrow's Manpower Needs" methodology developed by the U.S. Bureau of Labor Statistics. The methodology calls for the combining of a matrix of industry and occupational employment and a crosswalk of correspondence between the matrix occupational categories and a set of vocational programs to produce a set of staffing ratios. The staffing ratios describe the proportion of employment in each of 18 economic sectors of the Hawaii economy appropriate to each of the vocational programs of the forecast. The staffing ratios are derived from two points of time to capture shifts in the industry-occupation mix of the labor force.

A six-year economic outlook for the state, prepared by the Hawaii Department of Planning and Economic Development is then combined with the set of staffing ratios to determine future levels of employment appropriate to each vocational program. From these employment levels, demand or job opportunities are derived.

### Projected Job Opportunities by Employment Fields

Agriculture. The agriculture field is one of the smallest with only two current programs. Job opportunities for these two programs averaged over the five-year forecast show 802 annual job opportunities. This represents five percent of the total job opportunities for all current vocational programs.

The field summary from the forecast:

-----AGRICULTURE-----

| Fiscal Year | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| Job Opportunities | 832 | 817 | 771 | 780 | 808 |

Distributive. The distributive field includes programs such as finance, food service, general merchandising, hotel operations, and recreation and tourism. Thus, the demand for employment in this field is highly sensitive to tourism growth or slowdown.

Job opportunities for current programs in this field are expected to average 3,695 per year over the five-year forecast period. This represents 22 percent of the job opportunities available in all current vocational programs.

The employment demand varies considerably from year to year. The pattern is a rise between 1983 and 1984, dropping back a little in 1985, and then growing at a moderate rate through 1987. General merchandising, being more insensitive to tourist levels than other programs in the field, shows a growth through 1984 that goes against the average for the field. This counter trend disguises the peak in 1984 that the other distributive programs are forecasted to enjoy.

The field summary from the forecast:

-----DISTRIBUTIVE-----

| Fiscal Year | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| Job Opportunities | 3,540 | 3,988 | 3,583 | 3,756 | 3,607 |

Health. Health vocational occupations include nine current program offerings. The forecast indicates an average 1983-86 demand of 738 job openings per year in these programs. This represents 4 percent of the total demand for all current vocational programs.

Current programs with a significant demand employment forecast are:

| Current Program | 1983 Demand | 1987 Demand |
|---|---|---|
| Practical Nursing | 278 | 329 |
| Nursing, A.S. Degree | 160 | 170 |
| Dental Assisting | 62 | 70 |
| Medical Assisting | 56 | 63 |

The field summary from the forecast:

-----HEALTH-----

| Fiscal Year | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| Job Opportunities | 664 | 775 | 738 | 761 | 754 |

Home Economics-Occupational Preparation. There is an average demand of 397 job openings per year between 1983 and 1987 in the home economics-occupational preparation field. This represents 2 percent of the total demand for all current vocational programs. In 1984, the peak year of economic recovery, job opportunities are projected to be 7 percent above the 5-year average.

The field summary from the forecast:

-----HOME ECONOMICS-OCCUPATIONAL PREPARATION-----

| Fiscal Year | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| Job Opportunities | 370 | 423 | 395 | 401 | 393 |

Office. The 9 current programs in office occupations account for 4,632 job openings each year, on the average, during the 5-year period 1983-1987. This represents 28 percent of the total job opportunities for current vocational programs.

Current programs forecast to have a large number of job opportunities are:

| Current Program | 1983 Demand | 1987 Demand |
|---|---|---|
| General Office | 1,174 | 1,382 |
| Stenography/Secretarial | 1,135 | 1,292 |
| Accounting | 1,109 | 1,182 |
| Typing and Related | 590 | 663 |

The field summary from the forecast:

-----OFFICE-----

| Fiscal Year | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| Job Opportunities | 4,213 | 4,818 | 4,553 | 4,825 | 4,751 |

Technical. There are three programs in the forecast for the technical field. Job opportunities in the field are projected to average 285 per year between 1983 and 1987 in these programs. This represents less than 2 percent of the total job opportunities for all current programs. Year by year demand for employment will vary; below average in 1983, above average in 1984; below average in 1985; and then peaking in 1986 and 1987.

The field summary from the forecast:

-----TECHNICAL-----

| Fiscal Year | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| Job Opportunities | 253 | 297 | 274 | 300 | 300 |

Trades and Industry. The trades and industry field has by far the largest number of programs of any field in the forecast. The average number of job opportunities per year between 1983 and 1987 is 6,029. This represents 36 percent of the total job opportunities projected for all current vocational programs.

The year by year variation for the employment demand in this field follows the same pattern as some other fields but has larger variations. In 1983, job opportunities will be 14 percent below the five-year average. In 1984, the job opportunities will be 13 percent above the five-year average but will fall again in 1985. Steady growth is then forecast for the next two years.

The field summary from the forecast:

-----TRADES AND INDUSTRY-----

| Fiscal Year | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|
| Job Opportunities | 5,180 | 6,799 | 5,744 | 6,043 | 6,379 |

Summary

The slowed economic growth experienced in Hawaii, especially in the hotel and tourist related industries as well as in the construction industry, is expected to recover in 1983 and peak in 1984. Job opportunities in most occupations will be up substantially, especially in 1984. After 1984, job opportunities are expected to maintain levels slightly below those of 1984.

In the table that follows, the top 20 vocational programs are ranked in descending order. The ranking of programs is a convenient way to see at a glance the programs which contain most of the job opportunities. In fact, the top 20 programs, while representing less than 20 percent of all the programs in the forecast cover 80 percent of the forecasted job opportunities.

| Code | Program | 1983 Rank | 1983 Demand | 1987 Rank | 1987 Demand |
|---|---|---|---|---|---|
| 04.0800 | General Merchandising | 1 | 2,168 | 1 | 2,298 |
| 17.2904 | Food Service-Dining Room | 2 | 1,227 | 3 | 1,322 |
| 14.0300 | General Office | 3 | 1,174 | 2 | 1,382 |
| 14.0700 | Stenography/Secretarial | 4 | 1,135 | 4 | 1,292 |
| 14.0100 | Accounting | 5 | 1,109 | 5 | 1,182 |
| 04.1100 | Hotel Operations | 6 | 864 | 7 | 810 |
| 17.2902 | Food Service-Cooks and Chefs | 7 | 790 | 6 | 918 |
| 14.0900 | Typing and Related | 8 | 590 | 8 | 663 |
| 01.0500 | Ornamental Horticulture | 9 | 546 | 9 | 583 |
| 17.2999 | Other Quantity Food Occupations | 10 | 364 | 11 | 336 |
| 17.0302 | Auto Mechanics | 11 | 313 | 13 | 324 |
| 17.1001 | Carpentry | 12 | 312 | 10 | 535 |
| 01.0100 | Agriculture Production | 13 | 286 | 18 | 225 |
| 07.0302 | Practical Nursing | 14 | 278 | 12 | 329 |
| 04.0700 | Food Service Management | 15 | 272 | 16 | 272 |
| 09.0201 | Child Care Services | 16 | 260 | 15 | 288 |
| 17.2602 | Cosmetology | 17 | 255 | 14 | 298 |
| 04.0400 | Finance | 18 | 193 | 19 | 178 |
| 16.0108 | Electronics Technology | 19 | 190 | 17 | 226 |
| 07.0301 | Nursing, A.S. Degree | 20 | 160 | 20 | 170 |

SECTION 3.0
TABLE 1
EMPLOYMENT OPPORTUNITIES RELATED TO VOCATIONAL EDUCATION PROGRAMS
LABOR DEMAND AND SUPPLY
STATE OF HAWAII
FY 1983 and 1987

| U.S. Dept. of Educ. Code | Occupational Areas | Anticipated 1/ Employment | | Projected Expansion & Replacement Needs 1/ & 2/ | | Projected Labor Supply 3/ | | | | | | | | Total Projected Supply | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Vocational Education Output | | | | | Other Sector Output | | | | |
| | | | | | | 1983 Estimates | | 1987 Estimates | | | | | | | |
| | | 1983 | 1987 | 1983 | 1987 | DOE 4/ | Comm. Coll. 5/ | DOE 4/ | Comm. Coll. 5/ | Appren-ticeship 6/ | C.E.T.A. 7/ | Private Schools 8/ | U.H. Related 4-Year Program 9/ | 1983 | 1987 |
| | TOTAL | 274,441 | 309,564 | 15,059 | 17,003 | 2,370 | 2,437 | 2,268 | 2,465 | 2,099 | 518 | 1,522 | 955 | 9,901 | 9,827 |
| 01. | AGRICULTURE | 14,136 | 13,809 | 832 | 808 | 253 | 22 | 284 | 21 | | | | 99 | 374 | 404 |
| .0100 | Agriculture Production Workers | 7,859 | 7,141 | 286 | 225 | 103 | 13 | 114 | 12 | | | | | 116 | 126 |
| .0500 | Ornamental Horticulture Workers | 6,277 | 6,668 | 546 | 583 | 150 | 9 | 170 | 9 | | | | | 159 | 179 |
| 04. | DISTRIBUTIVE | 56,708 | 64,657 | 3,540 | 3,607 | 274 | 202 | 245 | 204 | | 57 | 453 | 263 | 1,249 | 1,222 |
| .0400 | Financial Company Workers | 2,997 | 3,363 | 193 | 178 | | 3 | | 5 | | | 131 | 47 | 181 | 183 |
| .0700 | Food Service Managers | 5,282 | 5,744 | 272 | 272 | | | | | | | 4 | 16 | 20 | 20 |
| .0800 | General Merchandising Workers | 37,868 | 42,622 | 2,168 | 2,298 | | 144 | | 144 | | | | 105 | 249 | 249 |
| .1100 | Hotel Workers | 9,820 | 12,084 | 864 | 810 | | 55 | | 55 | | 57 | 77 | 95 | 284 | 284 |
| .1800 | Recreation & Tourism Workers | 741 | 844 | 43 | 49 | | | | | | | 241 | | 241 | 241 |
| 07. | HEALTH | 11,037 | 12,668 | 664 | 754 | | 173 | | 168 | | | 50 | 66 | 289 | 284 |
| .0101 | Dental Assistants | 1,025 | 1,172 | 62 | 70 | | 12 | | 12 | | | | | 12 | 12 |
| .0102 | Dental Hygienists | 355 | 481 | 38 | 47 | | | | | | | | 20 | 20 | 20 |
| .0203 | Medical Lab Technicians | 756 | 829 | 35 | 37 | | 5 | | 5 | | | | | 5 | 5 |
| .0301 | Nurses-Associate Degree | 3,613 | 3,931 | 160 | 170 | | 43 | | 42 | | | | 46 | 89 | 88 |
| .0302 | Practical Nurses | 3,706 | 4,452 | 278 | 329 | | 69 | | 67 | | | | | 69 | 67 |
| .0401 | Occupational Therapy Ass'ts | 110 | 132 | 9 | 9 | | 7 | | 6 | | | | | 7 | 6 |
| .0501 | Radiologic Technologists | 416 | 440 | 15 | 15 | | 18 | | 17 | | | | | 18 | 17 |
| .0903 | Respiratory Therapists | 181 | 218 | 11 | 14 | | 7 | | 7 | | | | | 7 | 7 |
| .0904 | Medical Assistants | 875 | 1,013 | 56 | 63 | | 12 | | 12 | | | 50 | | 62 | 62 |
| 09. | HOME ECONOMICS-OCCUP. PREPARATION | 6,108 | 6,854 | 370 | 393 | 91 | | 99 | | | | | 97 | 188 | 196 |
| .0201 | Child Care Service Workers | 3,820 | 4,464 | 260 | 288 | 20 | | 20 | | | | | | 20 | 20 |
| .0202 | Cloth. Mgmt. Prod. & Serv. Workers | 2,011 | 2,117 | 100 | 98 | 2 | | 2 | | | | | | 2 | 2 |
| .0203 | Food Mgmt. Prod. & Serv. Workers (See 04.0700,17.2901,17.2902,17.2904,17.2999) | | | | | 64 | | 72 | | | | | | 64 | 72 |
| .0205 | Inst. & Home Mgmt. & Serv. Workers | 277 | 273 | 10 | 7 | 5 | | 5 | | | | | | 5 | 5 |
| 14. | OFFICE | 68,642 | 79,244 | 4,213 | 4,751 | 1,297 | 835 | 1,170 | 881 | | 274 | 563 | 237 | 3,206 | 3,125 |
| .0100 | Accounting Workers | 20,551 | 22,994 | 1,109 | 1,182 | 371 | 208 | 330 | 224 | | | 222 | 187 | 988 | 963 |
| .0201 | Computer & Console Workers | 1,394 | 1,613 | 56 | 68 | | 7 | | 7 | | | | | | |
| .0203 | Programmers | 1,609 | 1,906 | 85 | 100 | 86 | 76 | 90 | 76 | | | | 50 | 343 | 347 |
| .0299 | Other Data Process Workers | 1,016 | 951 | 14 | 5 | | | | | | | 124 | | | |
| .0300 | Gen. Office Clerical Workers | 15,782 | 19,218 | 1,174 | 1,382 | 483 | 134 | 429 | 131 | | 260 | 75 | | 952 | 895 |
| .0499A | Medical Records Technicians | 189 | 240 | 20 | 24 | | | | | | 14 | 10 | | 24 | 24 |
| .0499B | Library Technicians | 518 | 595 | 30 | 35 | | 6 | | 6 | | | | | 6 | 6 |
| .0700 | Stenos., Sec., & Related | 17,404 | 20,191 | 1,135 | 1,292 | 147 | 269 | 133 | 305 | | | 92 | | 508 | 530 |
| .0900 | Typists & Related | 10,179 | 11,536 | 590 | 663 | 210 | 135 | 188 | 132 | | | 40 | | 385 | 360 |
| 16. | TECHNICAL | 5,421 | 6,265 | 253 | 300 | 67 | 105 | 75 | 102 | | | 228 | | 400 | 405 |
| .0106 | Engineering Technicians | 1,029 | 1,169 | 53 | 67 | | 9 | | 9 | | | | | 9 | 9 |
| .0108 | Electronics Technicians | 3,923 | 4,637 | 190 | 226 | 67 | 81 | 75 | 78 | | | 44 | | 192 | 197 |
| .0604 | Marine Technicians | 469 | 459 | 10 | 7 | | 15 | | 15 | | | 184 | | 199 | 199 |

TABLE 1 (Cont'd)

| U.S. Dept. of Educ. Code | Occupational Areas | Anticipated 1/ Employment | | Projected Expansion & Replacement Needs 1/ & 2/ | | Projected Labor Supply 3/ | | | | | | | | Total Projected Supply | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | Vocational Education Output | | | | Other Sector Output | | | | | |
| | | | | | | 1983 Estimates | | 1987 Estimates | | | | | | | |
| | | 1983 | 1987 | 1983 | 1987 | DOE 4/ | Comm. Coll. 5/ | DOE 4/ | Comm. Coll. 5/ | Apprenticeship 6/ | C.E.T.A. 7/ | Private Schools 8/ | U.S. Related 4-Year Program 9/ | 1983 | 1987 |
| 17. | TRADES & INDUSTRY | 112,389 | 126,067 | 5,187 | 6,390 | 388 | 1,100 | 395 | 1,089 | 2,099 | 187 | 228 | 193 | 4,195 | 4,191 |
| .0301 | Auto Body Repairers | 1,370 | 1,453 | 46 | 45 | 194 | 43 | 202 | 42 | | 65 | | | 566 | 583 |
| .0302 | Auto Mechanics | 7,645 | 8,490 | 313 | 324 | | 152 | | 162 | 79 | | 33 | | | |
| .0400 | Aviation Maintenance Workers | 1,464 | 1,729 | 74 | 71 | | 17 | | 17 | | | | | 17 | 17 |
| .0700 | Commercial Artists | 1,712 | 1,874 | 72 | 82 | | 34 | | 33 | | | | 143 | 177 | 176 |
| .1001 | Carpenters | 8,320 | 9,346 | 312 | 535 | | 46 | | 45 | 579 | | | | | |
| .1002 | Electricians | 2,957 | 3,309 | 112 | 163 | | 46 | | 44 | | | | | | |
| .1003A | Operating Engineers | 3,550 | 4,025 | 137 | 214 | | | | | | | | | | |
| .1003B | Heavy Equip. Oper. & Repairers | 3,860 | 4,205 | 157 | 188 | 78 | 40 | 64 | 37 | 64 | | | | 1,120 | 1,100 |
| .1004 | Masons | 1,570 | 1,810 | 60 | 106 | | | | | 135 | 15 | | | | |
| .1005 | Painters, Decorators, Plasterers, Caulkers, & Weather Proofers | 1,905 | 2,019 | 68 | 99 | | | | | 117 | | | | | |
| .1006 | Plasterers | 125 | 124 | -1 | 3 | | | | | 42 | | | | 42 | 42 |
| .1007 | Plumbers and Pipefitters | 2,443 | 2,868 | 125 | 175 | | | | | 150 | | | | 150 | 150 |
| .1008 | Drywall Instal., Lathers & Tapers | 704 | 772 | 7 | 28 | | | | | 10 | | | | 10 | 10 |
| .1009 | Glaziers | 366 | 401 | 9 | 11 | | | | | 94 | | | | 94 | 94 |
| .1010 | Roofers | 436 | 516 | 19 | 35 | | | | | 46 | | | | 46 | 46 |
| .1099A | Cement Finishers | 527 | 593 | 14 | 31 | | | | | 101 | | | | 101 | 101 |
| .1099B | Floor Layers | 344 | 372 | 8 | 11 | 12 | | 20 | | 27 | | | | 39 | 47 |
| .1099D | Ironworkers-Struc. & Fabrication | 494 | 590 | 16 | 32 | | | | | 99 | | | | 99 | 99 |
| .1099E | Ironworkers-Reinforcing Steel | (See 17.1099D) | | | | | | | | | | | | | |
| .1099F | Asbestos Workers | 123 | 149 | 7 | 12 | | | | | 22 | | | | 22 | 22 |
| .1099I | Construction Laborers | 3,658 | 3,926 | 76 | 182 | 12 | | 20 | | | | | | 12 | 20 |
| .1099K | Building Maintenance Workers | 356 | 385 | 13 | 14 | 17 | 3 | 27 | 3 | 2 | | | | 22 | 32 |
| .1200 | Diesel Mechanics | (See 17.1003B) | | | | | | | | | | | | | |
| .1300 | Drafters | 2,128 | 2,441 | 88 | 111 | 18 | 61 | 18 | 61 | | | | | 79 | 79 |
| .1400 | Industrial Electricians | 549 | 559 | 6 | 11 | | | | | 124 | | | | 124 | 124 |
| .1500 | Electronics Mechanics | (See 16.0108) | | | | | | | | | | | | | |
| .1900 | Graphic Artists | 1,175 | 1,167 | 2 | 30 | 34 | 9 | 26 | 9 | | | | | 43 | 35 |
| .2101 | Misc. Mechanics & Repairers | 831 | 899 | 30 | 35 | | | | | 174 | | | | 174 | 174 |
| .2302 | Machine Shop Workers | 1,427 | 1,486 | 40 | 44 | | 40 | | 39 | 41 | | | | | |
| .2305 | Sheetmetal Workers | 670 | 734 | 13 | 27 | 23 | 24 | 18 | 23 | 55 | | | | 257 | 249 |
| .2306 | Welders | 2,702 | 3,172 | 137 | 186 | | 34 | | 33 | 40 | | | | | |
| .2400 | Metals Inspectors | (See 17.2302) | | | | | | | | | | | | | |
| .2602 | Cosmetologists | 3,278 | 3,985 | 255 | 298 | | 51 | | 50 | | | 186 | | 237 | 236 |
| .2801 | Fire Fighters | 1,709 | 1,691 | -7 | 14 | | 55 | | 53 | | | | | 55 | 53 |
| .2802A | Law Enforcement Officers | 4,768 | 5,035 | 129 | 164 | | 68 | | 66 | | | | | 68 | 66 |
| .2899B | Recreation Workers | 878 | 1,021 | 54 | 64 | | 24 | | 25 | | | | 30 | 54 | 55 |
| .2899F | Legal Assistants | 482 | 549 | 27 | 3[illegible] | | 22 | | 22 | | | | | 22 | 22 |
| .2899H | Occup. Safety & Health Inspectors | 1,704 | 1,878 | 60 | 83 | | 18 | | 17 | | | | | 18 | 17 |
| .2899I | Human Service Workers | 1,933 | 2,172 | 103 | 132 | | 58 | | 57 | | | | 20 | 78 | 77 |
| .2901 | Commercial Bakers | 762 | 834 | 34 | 34 | | 7 | | 6 | | | | | 7 | 6 |
| .2902 | Cooks & Chefs | 9,865 | 11,952 | 790 | 918 | | 75 | | 75 | 13 | | | | 88 | 88 |
| .2903 | Meatcutters | 890 | 915 | 29 | 25 | | | | | 15 | | | | 15 | 15 |
| .2904 | Dining Room Workers | 19,619 | 22,807 | 1,227 | 1,322 | | 98 | | 96 | | | | | | |
| .2999 | Other Quant. Food Occup. Workers | 7,693 | 8,341 | 364 | 336 | | | | | | 107 | | | 205 | 203 |
| .3000 | Refrig. & Air Cond. Workers | 1,037 | 1,186 | 42 | 54 | | 55 | | 54 | 50 | | | | 105 | 104 |
| .3300 | Apparel & Fabric Workers | 4,110 | 4,048 | 116 | 107 | | 20 | | 20 | | | 9 | | 29 | 29 |
| .3600 | Woodworkers | 250 | 239 | 4 | 2 | | | | | 20 | | | | 20 | 20 |

Footnotes For Table 1: Labor Demand And Supply Summary

1/ Data from the Hawaii Vocational Education Occupational Employment Projections Program, Office of the State Director for Vocational Education, University of Hawaii, August, 1981.

2/ The definition for expansion is an increase in new jobs from the preceding year employment level, while replacement is the number of job openings resulting from vacancies left by persons who have retired, quit, died, migrated out of state, or otherwise left the specified occupational work force. Both expansion and replacement needs for 1983 and 1987 are annual estimates for those respective years only.

3/ Represents output for specified years only. Supply data are sometimes not available in occupational detail, so six-digit programs may add to less than two-digit field totals.

4/ Source: Occupational Development Section, Hawaii Department of Education, August, 1981.

5/ Source: Office of the Chancellor, University of Hawaii Community Colleges/ Office of the State Director for Vocational Education, August, 1981.

6/ Source: "Apprenticeship Registrations, Cancellations, Completions, and Enrollment by Trade, Fiscal Year 1980-1981," Apprenticeship Division, Hawaii Department of Labor and Industrial Relations, August, 1981. Those enrolled in apprenticeship programs are already employed so they are not true estimates of labor supply.

7/ Source: Non-Financial Agreement, Governor's Grant Training Project, FY 1981. Office of Manpower Planning, Hawaii Department of Labor and Industrial Relations and Office of Human Resources, City and County of Honolulu.

8/ Source: Files of the Accreditation and Licensing Section, Hawaii Department of Education, showing 1980-81 graduates for some private schools. Data are incomplete estimates.

9/ "Degrees, Diplomas, and Certificates Conferred, University of Hawaii, FY 1981," Office of Institutional Research and Analysis, University of Hawaii, November, 1980.

SECTION 3.0

TABLE 2

EMPLOYMENT OPPORTUNITIES RELATED TO VOCATIONAL EDUCATION PROGRAMS: LABOR SUPPLY AND DEMAND DETAIL

| U.S. DEPT. OF EDUCATION CODE | INSTRUCTIONAL PROGRAM | 1983 | | | | 1984 | | | | 1985 | | | | 1986 | | | | 1987 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1/ ANTIC. EMPLOY. | 2/ PROJ. DEMAND | 3/ PROJ. SUPPLY | *SURPLUS (+) DEFICIT (-) | 1/ ANTIC. EMPLOY. | 2/ PROJ. DEMAND | 3/ PROJ. SUPPLY | *SURPLUS (+) DEFICIT (-) | 1/ ANTIC. EMPLOY. | 2/ PROJ. DEMAND | 3/ PROJ. SUPPLY | *SURPLUS (+) DEFICIT (-) | 1/ ANTIC. EMPLOY. | 2/ PROJ. DEMAND | 3/ PROJ. SUPPLY | *SURPLUS (+) DEFICIT (-) | 1/ ANTIC. EMPLOY. | 2/ PROJ. DEMAND | 3/ PROJ. SUPPLY | *SURPLUS (+) DEFICIT (-) |
| | TOTALS | 274,441 | 15,059 | 9,901 | -5,158 | 284,499 | 17,933 | 9,881 | -8,052 | 292,496 | 16,068 | 9,885 | -6,183 | 291,076 | 16,779 | 9,831 | -6,948 | 246,690 | 17,003 | 9,827 | -7,176 |
| 01. | AGRICULTURE | 14,136 | 832 | 374 | -458 | 14,072 | 817 | 383 | -434 | 13,967 | 771 | 388 | -383 | 13,873 | 780 | 393 | -387 | 13,809 | 808 | 404 | -404 |
| .0100 | Agriculture Production Workers | 7,859 | 286 | 116 | -170 | 7,674 | 221 | 119 | -102 | 7,484 | 205 | 121 | -84 | 7,293 | 194 | 122 | -72 | 7,141 | 225 | 126 | -99 |
| .0500 | Ornamental Horticulture Workers | 6,277 | 546 | 159 | -387 | 6,398 | 596 | 165 | -431 | 6,483 | 566 | 168 | -398 | 6,580 | 586 | 172 | -414 | 6,668 | 583 | 179 | -404 |
| 04. | DISTRIBUTIVE | 56,708 | 3,540 | 1,249 | -2,291 | 59,028 | 3,988 | 1,241 | -2,747 | 60,892 | 3,583 | 1,237 | -2,346 | 62,874 | 3,756 | 1,227 | -2,529 | 64,657 | 3,607 | 1,222 | -2,385 |
| .0400 | Financial Company Workers | 2,997 | 193 | 181 | -12 | 3,094 | 189 | 182 | -7 | 3,181 | 181 | 182 | +1 | 3,284 | 200 | 183 | -17 | 3,363 | 178 | 183 | +5 |
| .0700 | Food Service Managers | 5,282 | 272 | 20 | -252 | 5,434 | 318 | 20 | -298 | 5,546 | 281 | 20 | -261 | 5,647 | 273 | 20 | -253 | 5,744 | 272 | 20 | -252 |
| .0800 | General Merchandising Workers | 37,868 | 2,168 | 249 | -1,919 | 39,184 | 2,395 | 250 | -2,145 | 40,304 | 2,229 | 251 | -1,978 | 41,497 | 2,335 | 250 | -2,085 | 42,622 | 2,298 | 249 | -2,049 |
| .1100 | Hotel Workers | 9,820 | 864 | 284 | -580 | 10,546 | 1,034 | 284 | -750 | 11,066 | 843 | 284 | -559 | 11,626 | 899 | 284 | -615 | 12,084 | 810 | 284 | -526 |
| .1800 | Recreation & Tourism Workers | 741 | 43 | 241 | +198 | 770 | 52 | 241 | +189 | 795 | 49 | 241 | +192 | 820 | 49 | 241 | +192 | 844 | 49 | 241 | -192 |
| 07. | HEALTH | 11,037 | 664 | 289 | -375 | 11,480 | 775 | 288 | -487 | 11,875 | 738 | 288 | -450 | 12,281 | 761 | 286 | -475 | 12,668 | 754 | 284 | -470 |
| .0101 | Dental Assistants | 1,025 | 62 | 12 | -54 | 1,065 | 72 | 12 | -60 | 1,101 | 69 | 13 | -56 | 1,137 | 70 | 12 | -58 | 1,172 | 70 | 12 | -58 |
| .0102 | Dental Hygienists | 355 | 38 | 20 | -18 | 386 | 43 | 20 | -23 | 417 | 44 | 20 | -24 | 449 | 46 | 20 | -26 | 481 | 47 | 20 | -27 |
| .0203 | Medical Lab Technicians | 756 | 35 | 5 | -31 | 777 | 41 | 5 | -36 | 795 | 38 | 5 | -33 | 813 | 38 | 5 | -33 | 829 | 37 | 5 | -32 |
| .0301 | Nurses-Associate Degree | 3,613 | 160 | 89 | -71 | 3,709 | 192 | 88 | -104 | 3,785 | 174 | 88 | -86 | 3,862 | 177 | 88 | -89 | 3,931 | 170 | 88 | -82 |
| .0302 | Practical Nurses | 3,706 | 278 | 83 | -195 | 3,901 | 322 | 69 | -253 | 4,081 | 313 | 69 | -244 | 4,268 | 326 | 68 | -258 | 4,452 | 329 | 67 | -262 |
| .0401 | Occupational Therapy Assts. | 110 | 9 | 8 | -1 | 115 | 9 | 7 | -2 | 121 | 10 | 7 | -3 | 127 | 10 | 7 | -3 | 132 | 9 | 6 | -3 |
| .0501 | Radiologic Technologists | 416 | 15 | 18 | 0 | 424 | 18 | 18 | 0 | 430 | 16 | 17 | +1 | 436 | 17 | 17 | 0 | 440 | 15 | 17 | +2 |
| .0903 | Respiratory Therapists | 181 | 11 | 7 | -4 | 191 | 14 | 7 | -7 | 200 | 13 | 7 | -6 | 209 | 13 | 7 | -6 | 218 | 14 | 7 | -7 |
| .0904 | Medical Assistants | 875 | 56 | 62 | +2 | 912 | 64 | 62 | -2 | 945 | 61 | 62 | +1 | 980 | 64 | 62 | +2 | 1,013 | 63 | 62 | -1 |
| 09. | HOME ECONOMICS - OCCUP. PREPARATION | 6,108 | 370 | 188 | -182 | 6,321 | 425 | 190 | -235 | 6,503 | 395 | 192 | -203 | 6,685 | 401 | 194 | -207 | 6,854 | 393 | 196 | -197 |
| .0201 | Child Care Service Workers | 3,820 | 260 | 20 | -240 | 3,993 | 296 | 20 | -276 | 4,149 | 279 | 20 | -259 | 4,309 | 288 | 20 | -259 | 4,464 | 288 | 20 | -268 |
| .0202 | Cloth. Mgmt. Prod. & Serv. Workers | 2,011 | 100 | 2 | -98 | 2,050 | 118 | 2 | -116 | 2,077 | 107 | 2 | -105 | 2,100 | 104 | 2 | -105 | 2,117 | 98 | 2 | -96 |
| .0203 | Food Mgmt. Prod. & Serv. | (See 04.0700,17.2901, 17.2902,17.2904,17.2999) | | 64 | ---- | | | 66 | ---- | | | 68 | ---- | | | 70 | ---- | | | 72 | ---- |
| .0205 | Inst. & Home Mgmt. & Serv. Workers | 277 | 10 | 5 | -5 | 278 | 11 | 5 | -6 | 277 | 9 | 5 | -4 | 276 | 9 | 5 | -4 | 273 | 7 | 5 | -2 |
| 14. | OFFICE | 68,642 | 4,213 | 3,206 | -1,007 | 71,481 | 4,818 | 3,180 | -1,638 | 73,985 | 4,553 | 3,178 | -1,375 | 76,686 | 4,825 | 3,135 | -1,690 | 79,244 | 4,751 | 3,125 | -1,626 |
| .0100 | Accounting Workers | 20,551 | 1,109 | 988 | -121 | 21,255 | 1,276 | 980 | -296 | 21,827 | 1,159 | 980 | -179 | 22,430 | 1,206 | 966 | -240 | 22,994 | 1,182 | 963 | -219 |
| .0201 | Computer & Console Workers | 1,394 | 56 | | ---- | 1,451 | 70 | | ---- | 1,503 | 65 | | ---- | 1,559 | 70 | | ---- | 1,613 | 68 | | ---- |
| .0203 | Programmers | 1,609 | 85 | 343 | +188 | 1,685 | 99 | 345 | +157 | 1,756 | 95 | 346 | +174 | 1,832 | 101 | 347 | +165 | 1,906 | 100 | 347 | +174 |
| .0299 | Other Data Processing Workers | 1,016 | 14 | | ---- | 1,006 | 19 | | ---- | 990 | 12 | | ---- | 973 | 11 | | ---- | 951 | 5 | | ---- |
| .0300 | Gen. Office Clerical Workers | 15,782 | 1,174 | 952 | -222 | 16,656 | 1,327 | 933 | -394 | 17,475 | 1,295 | 922 | -373 | 18,359 | 1,384 | 904 | -480 | 19,218 | 1,382 | 895 | -487 |
| .0499A | Medical Records Technician | 139 | 20 | 24 | +4 | 202 | 22 | 24 | +2 | 214 | 22 | 24 | +2 | 227 | 23 | 24 | +1 | 240 | 24 | 24 | 0 |
| .0499B | Library Technicians | 518 | 30 | 6 | -24 | 539 | 36 | 6 | -30 | 557 | 33 | 6 | -27 | 576 | 35 | 6 | -29 | 595 | 35 | 6 | -29 |
| .0700 | Stenos., Sec., & Related | 17,404 | 1,135 | 508 | -627 | 18,141 | 1,291 | 515 | -776 | 18,798 | 1,232 | 529 | -703 | 19,516 | 1,315 | 524 | -791 | 20,191 | 1,292 | 530 | -762 |
| .0900 | Typists & Related | 10,179 | 590 | 385 | -205 | 10,546 | 678 | 377 | -301 | 10,865 | 640 | 371 | -269 | 11,214 | 680 | 364 | -316 | 11,536 | 663 | 360 | -303 |
| 16. | TECHNICAL | 5,421 | 253 | 400 | +147 | 5,640 | 297 | 401 | +104 | 5,834 | 274 | 403 | +129 | 6,051 | 300 | 404 | +104 | 6,265 | 300 | 405 | +105 |
| .0106 | Engineering Technicians | 1,029 | 53 | 9 | -44 | 1,067 | 66 | 9 | -57 | 1,098 | 60 | 9 | -51 | 1,133 | 65 | 9 | -56 | 1,169 | 67 | 9 | -58 |
| .0108 | Electronics Technicians | 3,923 | 190 | 192 | +2 | 4,104 | 220 | 193 | -27 | 4,270 | 206 | 195 | -11 | 4,455 | 227 | 196 | -31 | 4,637 | 226 | 197 | -29 |
| .0604 | Marine Technicians | 469 | 10 | 199 | +189 | 469 | 11 | 199 | +188 | 466 | 8 | 199 | +191 | 463 | 8 | 199 | +191 | 459 | 7 | 199 | +192 |

TABLE 2 (Cont'd)

| U.S. DEPT. OF EDUCATION CODE | INSTRUCTIONAL PROGRAM | 1983 1/ ANTIC. EMPLOY. | 1983 2/ PROJ. DEMAND | 1983 3/ PROJ. SUPPLY | 1983 *SURPLUS (+) DEFICIT (-) | 1984 1/ ANTIC. EMPLOY. | 1984 2/ PROJ. DEMAND | 1984 3/ PROJ. SUPPLY | 1984 *SURPLUS (+) DEFICIT (-) | 1985 1/ ANTIC. EMPLOY. | 1985 2/ PROJ. DEMAND | 1985 3/ PROJ. SUPPLY | 1985 *SURPLUS (+) DEFICIT (-) | 1986 1/ ANTIC. EMPLOY. | 1986 2/ PROJ. DEMAND | 1986 3/ PROJ. SUPPLY | 1986 *SURPLUS (+) DEFICIT (-) | 1987 1/ ANTIC. EMPLOY. | 1987 2/ PROJ. DEMAND | 1987 3/ PROJ. SUPPLY | 1987 *SURPLUS (+) DEFICIT (-) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17. | TRADES & INDUSTRY | 112,389 | 5,187 | 4,195 | -992 | 116,477 | 6,813 | 4,198 | -2,615 | 119,440 | 5,754 | 4,199 | -1,555 | 112,626 | 5,956 | 4,192 | -1,764 | 126,067 | 6,390 | 4,191 | -2,199 |
| .0301 | Auto Body and Repairers | 1,370 | 46 | 566 | +207 | 1,398 | 56 | 572 | +154 | 1,418 | 48 | 577 | +209 | 1,437 | 47 | 580 | +196 | 1,453 | 45 | 583 | +214 |
| .0302 | Auto Mechanics | 7,645 | 313 | | | 7,887 | 362 | | | 8,084 | 320 | | | 8,295 | 337 | | | 8,490 | 324 | | |
| .0400 | Aviation Maintenance Workers | 1,464 | 74 | 17 | -57 | 1,535 | 83 | 17 | -66 | 1,601 | 78 | 17 | -61 | 1,671 | 83 | 17 | -66 | 1,729 | 71 | 17 | -54 |
| .0700 | Commercial Artists | 1,712 | 72 | 177 | +105 | 1,757 | 85 | 177 | +92 | 1,795 | 79 | 177 | +98 | 1,835 | 82 | 176 | +94 | 1,874 | 82 | 176 | +94 |
| .1001 | Carpenters | 8,320 | 312 | 1,120 | +274 | 8,677 | 560 | 1,115 | ---- | 8,819 | 349 | 1,110 | ---- | 9,031 | 424 | 1,106 | ---- | 9,346 | 535 | 1,100 | ---- |
| .1002 | Electricians | 2,957 | 112 | | ---- | 3,064 | 164 | | ---- | 3,127 | 121 | | ---- | 3,208 | 141 | | ---- | 3,309 | 163 | | ---- |
| .1003A | Operating Engineers | 3,550 | 137 | | | 3,698 | 216 | | ---- | 3,780 | 151 | | ---- | 3,885 | 176 | | ---- | 4,025 | 214 | | ---- |
| .1003B | Heavy Equip. Oper. & Repairers | 3,860 | 157 | | | 3,956 | 190 | | -239 | 4,030 | 169 | | +180 | 4,116 | 183 | | +14 | 4,205 | 188 | | -205 |
| .1004 | Masons | 1,570 | 60 | | ---- | 1,651 | 112 | | ---- | 1,687 | 67 | | ---- | 1,738 | 83 | | ---- | 1,810 | 106 | | ---- |
| .1005 | Painters, Decorators, Plasterers, Caulkers, & Weather Proofers | 1,905 | 68 | | ---- | 1,954 | 112 | | ---- | 1,964 | 73 | | ---- | 1,985 | 85 | | ---- | 2,019 | 99 | | ---- |
| .1006 | Plasterers | 125 | -1 | 42 | +42 | 127 | 4 | 42 | +38 | 125 | 0 | 42 | +42 | 123 | 0 | 42 | +42 | 124 | 3 | 42 | +39 |
| .1007 | Plumbers and Pipefitters | 2,443 | 125 | 150 | +25 | 2,561 | 167 | 150 | -17 | 2,646 | 136 | 150 | +14 | 2,748 | 155 | 150 | -5 | 2,868 | 175 | 150 | -25 |
| .1008 | Drywall Instal., Lathers & Tapers | 704 | 7 | 10 | +3 | 733 | 34 | 10 | -24 | 737 | 9 | 10 | +1 | 749 | 17 | 10 | -7 | 772 | 28 | 10 | -18 |
| .1009 | Glaziers | 366 | 9 | 94 | +85 | 376 | 12 | 94 | +82 | 383 | 9 | 94 | +85 | 392 | 11 | 94 | +83 | 401 | 11 | 94 | +83 |
| .1010 | Roofers | 436 | 19 | 46 | +27 | 463 | 36 | 46 | +10 | 475 | 21 | 46 | +25 | 491 | 26 | 46 | +20 | 516 | 35 | 46 | +11 |
| .1099A | Cement Finishers | 527 | 14 | 101 | +87 | 551 | 32 | 101 | +69 | 558 | 15 | 101 | +86 | 571 | 22 | 101 | +29 | 593 | 31 | 101 | +70 |
| .1099B | Floor Layers | 344 | 8 | 39 | +31 | 354 | 13 | 41 | +28 | 359 | 8 | 43 | +35 | 365 | 10 | 45 | +35 | 372 | 11 | 47 | +36 |
| .1099D | Ironworkers-Struc. & Fabrication | 494 | 16 | 99 | +83 | 525 | 34 | 99 | +65 | 540 | 18 | 99 | +81 | 561 | 24 | 99 | +75 | 590 | 32 | 99 | +67 |
| .1099E | Ironworkers-Reinforcing Steel | (See 17.1099D) | | | | | | | | | | | | | | | | | | | |
| .1099F | Asbestos Workers | 123 | 7 | 22 | +15 | 130 | 10 | 22 | +12 | 135 | 8 | 22 | +14 | 141 | 10 | 22 | +12 | 149 | 12 | 22 | +10 |
| .1099I | Construction Laborers | 3,658 | 76 | 12 | -64 | 3,733 | 207 | 14 | -193 | 3,789 | 89 | 16 | -73 | 3,830 | 124 | 18 | -106 | 3,926 | 182 | 20 | -162 |
| .1099K | Building Maintenance Workers | 356 | 13 | 22 | +9 | 365 | 17 | 24 | +7 | 371 | 14 | 26 | +12 | 379 | 16 | 28 | +12 | 385 | 14 | 32 | +18 |
| .1200 | Diesel Mechanics | (See 17.1003B) | | | | | | | | | | | | | | | | | | | |
| .1300 | Drafters | 2,128 | 88 | 79 | -9 | 2,212 | 113 | 79 | -34 | 2,283 | 101 | 80 | -21 | 2,362 | 10 | 79 | +69 | 2,441 | 111 | 79 | -32 |
| .1400 | Industrial Electricians | 549 | 6 | 124 | +118 | 554 | 13 | 124 | +111 | 553 | 6 | 124 | +118 | 556 | 10 | 124 | +114 | 559 | 11 | 124 | +113 |
| .1500 | Electronics Mechanics | (See 16.0108) | | | | | | | | | | | | | | | | | | | |
| .1900 | Graphic Artists | 1,175 | 2 | 43 | +41 | 1,174 | 32 | 41 | +9 | 1,172 | 30 | 39 | +9 | 1,169 | 29 | 37 | +8 | 1,167 | 30 | 35 | +5 |
| .2101 | Misc. Mechanics & Repairers | 831 | 30 | 174 | +144 | 851 | 38 | 174 | +136 | 867 | 34 | 174 | +140 | 883 | 34 | 174 | +140 | 899 | 35 | 174 | +139 |
| .2302 | Machine Shop Workers | 1,427 | 40 | 257 | +67 | 1,441 | 43 | 254 | +4 | 1,455 | 43 | 251 | +45 | 1,471 | 45 | 250 | +22 | 1,486 | 44 | 249 | -8 |
| .2305 | Sheetmetal Workers | 670 | 13 | | ---- | 692 | 29 | | ---- | 701 | 16 | | ---- | 714 | 20 | | ---- | 734 | 27 | | ---- |
| .2306 | Welders | 2,702 | 137 | | ---- | 2,832 | 178 | | ---- | 2,929 | 147 | | ---- | 3,040 | 163 | | ---- | 3,172 | 186 | | ---- |
| .2400 | Metals Inspectors | (See 17.2302) | | | | | | | | | | | | | | | | | | | |
| .2602 | Cosmetologists | 3,278 | 255 | 237 | -18 | 3,464 | 293 | 237 | -56 | 3,634 | 283 | 287 | -46 | 3,811 | 295 | 236 | -59 | 3,985 | 298 | 236 | -62 |
| .2801 | Fire Fighters | 1,709 | -7 | 55 | +55 | 1,705 | 16 | 55 | +39 | 1,698 | 13 | 55 | +42 | 1,696 | 18 | 54 | +36 | 1,691 | 14 | 53 | +39 |
| .2802A | Law Enforcement Officers | 4,768 | 129 | 68 | -61 | 4,848 | 183 | 68 | -115 | 4,906 | 161 | 68 | -93 | 4,977 | 176 | 67 | -109 | 5,035 | 164 | 66 | -98 |
| .2899B | Recreation Workers | 878 | 54 | 54 | 0 | 916 | 64 | 55 | -9 | 950 | 61 | 55 | -6 | 986 | 64 | 55 | -9 | 1,021 | 64 | 55 | -9 |
| .2899F | Legal Assistants | 482 | 27 | 22 | -5 | 500 | 32 | 22 | -10 | 515 | 29 | 22 | -7 | 532 | 32 | 22 | -10 | 549 | 32 | 22 | -10 |
| .2899H | Occup. Safety & Health Inspectors | 1,704 | 60 | 18 | -42 | 1,746 | 77 | 18 | -59 | 1,785 | 75 | 17 | -58 | 1,833 | 85 | 17 | -68 | 1,878 | 83 | 17 | -66 |
| .2899I | Human Service Workers | 1,933 | 103 | 78 | -25 | 1,995 | 130 | 78 | -52 | 2,051 | 125 | 78 | -47 | 2,113 | 134 | 77 | -57 | 2,172 | 132 | 77 | -55 |
| .2901 | Commercial Bakers | 762 | 34 | 7 | -27 | 784 | 40 | 7 | -33 | 800 | 34 | 7 | -27 | 819 | 38 | 6 | -32 | 834 | 34 | 6 | -28 |
| .2902 | Cooks and Chefs | 9,865 | 790 | 88 | -702 | 10,430 | 918 | 88 | -830 | 10,936 | 876 | 88 | -788 | 11,438 | 889 | 88 | -801 | 11,952 | 918 | 88 | -830 |
| .2903 | Meatcutters | 890 | 29 | 15 | -14 | 901 | 33 | 15 | -18 | 906 | 27 | 15 | -12 | 912 | 28 | 15 | -13 | 915 | 25 | 15 | -10 |
| .2904 | Dining Room Workers | 19,619 | 1,227 | 205 | -1,386 | 20,549 | 1,455 | 205 | -1,684 | 21,321 | 1,317 | 205 | -1,476 | 22,067 | 1,310 | 204 | -1,458 | 22,807 | 1,322 | 203 | -1,455 |
| .2999 | Other Quant. Food Occup. Workers | 7,693 | 364 | | | 7,929 | 434 | | | 8,079 | 364 | | | 8,220 | 352 | | | 8,341 | 336 | | |
| .3000 | Refrig. & Air Cond. Workers | 1,037 | 42 | 105 | +63 | 1,080 | 57 | 105 | +48 | 1,110 | 44 | 105 | +61 | 1,147 | 52 | 104 | +52 | 1,186 | 54 | 104 | +50 |
| .3300 | Apparel & Fabric Workers | 4,110 | 116 | 29 | -87 | 4,087 | 125 | 29 | -96 | 4,121 | 183 | 29 | -154 | 4,087 | 114 | 29 | -85 | 4,048 | 107 | 29 | -78 |
| .3600 | Woodworkers | 250 | 4 | 20 | +16 | 248 | 4 | 20 | +16 | 245 | 3 | 20 | +17 | 242 | 2 | 20 | +18 | 239 | 2 | 20 | +18 |

Footnotes for Table 2: Employment Opportunities
Related to Vocational Education Programs

1/ Data extracted from the Hawaii Vocational Education Occupation Projection Model, Office of the State Director for Vocational Education, University of Hawaii, August, 1981.

2/ Demand represents the sum of expansion and replacement needs. Expansion is an increase in new jobs from the preceding year employment level. Replacement is the number of job openings resulting from vacancies left by persons who have retired, quit, died, migrated out of state, or otherwise left the specified occupational work force.

3/ Supply represents the projected output from the DOE, the community colleges, University of Hawaii, apprenticeship programs, CETA programs, and certain private trade and business schools. Supply data are sometimes not available in occupational detail, so six-digit programs may add to less than two-digit field totals.

SECTION 4.0
TABLE 3

POPULATION FACTORS RELATIVE TO VOCATIONAL EDUCATION PLANNING

| POPULATION CHARACTERISTICS | LATEST AVAILABLE DATA | | | | | SOURCE |
|---|---|---|---|---|---|---|
| | | COUNTY | | | | |
| | TOTAL | HONOLULU | HAWAII | KAUAI | MAUI | |
| 4.1 POPULATION | | | | | | |
| 4.11 Resident Population, 1980 | 965,000 | 762,874 | 92,053 | 39,082 | 70,991 | The Population of Hawaii, 1980: Final Census Results, Statistical Report 143. Research and Economic Analysis Division, Hawaii Department of Planning and Economic Development, March 18, 1981. |
| Percent Change (1970-1980) | +25.3% | +21.0% | +45.0% | +31.3% | +53.8% | |
| 4.12 Estimated Population, 1985 (II-F Series) | 1,020,900 | 803,800 | 95,200 | 40,600 | 81,400 | Long-Range Population and Economic Simulations and Projections for the State of Hawaii. Hawaii Department of Planning and Economic Development, March 1, 1978. (Figures may not equal totals because of rounding.) |
| Percent Change (1980-1985) | +5.8% | +5.4% | +3.4% | +3.9% | +14.7% | |
| 4.13 Estimated Population, 1990 (II-F Series) | 1,091,500 | 845,000 | 105,100 | 46,500 | 94,900 | |
| Percent Change (1985-1990) | +6.9% | +5.1% | +10.4% | +14.5% | +16.6% | |
| 4.14 Population Density (Defacto Population Per Square Mile, 1980) | 164.4 | 1,385.9 | 24.5 | 74.1 | 73.4 | Quarterly Statistical and Economic Report. Research and Economic Analysis Division, Hawaii Department of Planning and Economic Development, April, 1981. |
| 4.15 Age Distribution, 1980 | | | | | | The Population of Hawaii, 1980: Final Census Results, Statistical Report 143. Research and Economic Analysis Division, Hawaii DPED, March 18, 1981. |
| 5-14 Years | 148,075 | -- | -- | -- | -- | |
| 15-19 Years | 86,505 | -- | -- | -- | -- | |
| 20-24 Years | 105,761 | -- | -- | -- | -- | |
| 25-39 Years | 148,327 | -- | -- | -- | -- | |
| 40-59 Years | 189,396 | -- | -- | -- | -- | |
| 60 and Over | 114,040 | -- | -- | -- | -- | |
| 4.16 Sex Distribution, 1980 | | | | | | The Population of Hawaii, 1980: Final Census Results, Statistical Report 143. Research and Economic Analysis Division, Hawaii DPED, March 18, 1981. |
| Female | 48.7% | -- | -- | -- | -- | |
| Male | 51.3% | -- | -- | -- | -- | |
| 4.17 Ethnic Distribution, 1980 | | | | | | Data Book, 1981. "Ethnic Stock By Military Status, 1980", Hawaii DPED, 1981. |
| Caucasian | 26.3% | -- | -- | -- | -- | |
| Japanese | 23.5% | -- | -- | -- | -- | |
| Part-Hawaiian | 17.9% | -- | -- | -- | -- | |
| Filipino | 11.2% | -- | -- | -- | -- | |
| Mixed, Excluding Part-Hawaiian | 9.4% | -- | -- | -- | -- | |
| Chinese | 5.1% | -- | -- | -- | -- | |
| Black | 1.3% | -- | -- | -- | -- | |
| Korean | 1.3% | -- | -- | -- | -- | |
| Other, Unmixed, Unknown | 1.2% | -- | -- | -- | -- | |
| Samoan | 1.2% | -- | -- | -- | -- | |
| Hawaiian | 1.0% | -- | -- | -- | -- | |
| Puerto Rican | 0.7% | -- | -- | -- | -- | |

TABLE 3 (Cont'd)

| POPULATION CHARACTERISTICS | LATEST AVAILABLE DATA | | | | | SOURCE |
|---|---|---|---|---|---|---|
| | TOTAL | COUNTY | | | | |
| | | HONOLULU | HAWAII | KAUAI | MAUI | |
| 4.2 PERSONS WITH SPECIAL NEEDS | | | | | | |
| 4.21 Estimated number of handicapped persons, 1981 | | | | | | Estimated Number of Handicapped Persons by County by Age Groups, 1981. Department of Vocational Rehabilitation. |
| Below 15 | 18,412 | 14,540 | 1,762 | 752 | 1,358 | |
| 15-19 Years of Age | 6,764 | 5,342 | 647 | 275 | 500 | |
| 20-24 Years of Age | 7,064 | 5,579 | 676 | 288 | 521 | |
| 25-44 Years of Age | 22,545 | 17,805 | 2,159 | 918 | 1,663 | |
| 45-64 Years of Age | 14,279 | 11,276 | 1,367 | 582 | 1,054 | |
| 65 and Over | 6.087 | 4,807 | 582 | 249 | 449 | |
| 4.22 Public School Special Education Enrollment, Grades 9-12 | | | | | | Enrollment Projections of the Public Schools in Hawaii, 1981-86. Office of Business Services/Student Information Services Branch, Hawaii Department of Education, May, 1981. |
| 1983 Projection | 3,477 | 2,553 | 454 | 203 | 267 | |
| 1987 Projection | 3,531 | 2,560 | 482 | 213 | 276 | |
| 4.23 No. of 25-Year Old and Over Persons Completing Years of School | | | | | | Data Book, 1981. "Years of School Completed by Persons 25 Years and Over, By Age: 1980," Hawaii Department of Planning and Economic Development, 1981. |
| 8 Years or Less | 70,140 | -- | -- | -- | -- | |
| 9-11 Years | 47,724 | -- | -- | -- | -- | |
| 12 Years | 188,020 | -- | -- | -- | -- | |
| 13-15 Years | 77,021 | -- | -- | -- | -- | |
| 16 Years | 72,432 | -- | -- | -- | -- | |
| 17 Years or More | 39,655 | -- | -- | -- | -- | |
| Vocational Education | 24,920 | -- | -- | -- | -- | |
| Not Reported | 12,165 | -- | -- | -- | -- | |
| 4.24 Displaced Homemakers | 14,507 | 11,632 | 1,406 | 536 | 933 | A Demographic Profile of the Population of Women Between the Ages of 35 to 64 Years in the State of Hawaii. Survey and Marketing Services, Inc., for the Hawaii State Commission on the Status of Women, December, 1977. |
| Urban Areas | 8,930 | 7,473 | 756 | 121 | 580 | |
| Rural Areas | 5,577 | 4,159 | 650 | 415 | 353 | |
| 4.25 Elderly (Age 55 and Over) | 161,451 | -- | -- | -- | -- | The Population of Hawaii, 1980: Final Census Results. Statistical Report 143. Research and Economic Analysis Division, Hawaii Department of Planning and Economic Development, March 18, 1981. |
| 4.26 Intended Residents Arriving in Hawaii | | | | | | Data Book, 1981. "Intended Residents Arriving in Hawaii From the Mainland United States: 1970 to 1980," "Immigrants Admitted by Country of Birth: 1970 to 1979," Hawaii Department of Planning and Economic Development, 1981. |
| 1. Military Personnel and Dependents, 1980 | 10,656 | -- | -- | -- | -- | |
| 2. Civilian In-Migrants, 1980 | 3,266 | -- | -- | -- | -- | |

TABLE 3 (Cont'd)

| POPULATION CHARACTERISTICS | LATEST AVAILABLE DATA | | | | | SOURCE |
|---|---|---|---|---|---|---|
| | TOTAL | COUNTY | | | | |
| | | HONOLULU | HAWAII | KAUAI | MAUI | |
| 4.26 Intended Residents Arriving in Hawaii (Cont'd) | | | | | | |
| 3. Foreign Immigrant Groups, 1979 | | | | | | |
| Philippines | 5,016 | -- | -- | -- | -- | |
| Other Countries | 1,364 | -- | -- | -- | -- | |
| Korea | 1,192 | -- | -- | -- | -- | |
| China and Taiwan | 586 | -- | -- | -- | -- | |
| Japan | 365 | -- | -- | -- | -- | |
| Vietnam | 286 | -- | -- | -- | -- | |
| Canada | 135 | -- | -- | -- | -- | |
| 4.3 INCOME | | | | | | |
| 4.31 Poverty Population, 1974-75 | 94,337 | 70,515 | 14,067 | 3,407 | 6,348 | Data Book, 1981. "Poverty Population, Households, Families, and Unrelated Individuals, For Counties,1974-1975," Hawaii Department of Planning and Economic Development, 1981. |
| 4.32 Adult Welfare Recipients | 29,450 | 22,250 | 4,250 | 1,950 | 1,000 | Annual Planning Data, FY 1982. Research and Statistics Office, Hawaii Department of Labor and Industrial Relations, August, 1981. *Economically Disadvantaged refers to an individual who is: a member of a family which receives cash welfare payments under federal, state, or local welfare programs; a member of a family having a total income which in relation to to family size does not exceed the poverty level determined in accordance with criteria established by the Office of Management and Budget or 70 percent of the lower living standard income level, whichever is higher; or a foster child on behalf of whom state or local government payments are made. The family is any one or more persons living in a single household who are related to each other by blood, marriage, or adoption. Children/stepchildren receiving at least 50 percent of their support from parents/stepparents are considered members of that family. |
| 4.33 Economically Disadvantaged* | 50,250 | 36,950 | 8,800 | 3,100 | 1,400 | |
| 4.34 Long-Term Unemployed | 4,150 | 3,100 | 500 | 350 | 200 | |

TABLE 3 (Cont'd)

| POPULATION CHARACTERISTICS | LATEST AVAILABLE DATA | | | | | SOURCE |
|---|---|---|---|---|---|---|
| | TOTAL | COUNTY | | | | |
| | | HONOLULU | HAWAII | KAUAI | MAUI | |
| 4.4 EMPLOYMENT | | | | | | |
| 4.41 Civilian Labor Force, FY 1982 Average | 405,100 | 316,600 | 35,750 | 18,000 | 34,750 | Annual Planning Data, FY 1982. Research and Statistics Office, Hawaii Department of Labor and Industrial Relations, August, 1981. |
| Employment, FY 1982 Average | 384,800 | 301,550 | 33,400 | 17,100 | 32,750 | |
| Unemployment, FY 1982, Average | 20,300 | 15,050 | 2,350 | 900 | 2,000 | |
| Rate, FY 1982, Average | 5.0% | 4.8% | 6.6% | 5.0% | 5.8% | |
| 4.42 Ethnic Stock of Employed, 1980 | 372,478 | 284,824 | 36,236 | 17,337 | 34,085 | Data Book, 1981. "Ethnic Stock of Employed Civilians, 16 Years Old and Over, By Sex, By Counties, 1980," Hawaii Department of Planning and Economic Development, 1981. |
| Japanese | 118,713 | 93,910 | 11,380 | 5,066 | 8,357 | |
| Caucasian | 92,971 | 69,774 | 8,704 | 3,949 | 10,544 | |
| Part-Hawaiian | 52,812 | 35,773 | 8,041 | 2,525 | 6,473 | |
| Filipino | 44,476 | 31,815 | 3,754 | 3,759 | 5,148 | |
| Chinese | 22,785 | 21,869 | 342 | 257 | 317 | |
| Other Mixed | 21,569 | 15,750 | 2,421 | 1,482 | 1,916 | |
| Korean | 6,188 | 5,825 | 110 | -- | 253 | |
| Hawaiian | 3,870 | 2,358 | 850 | 93 | 569 | |
| Other Mixed, Unreported | 3,296 | 2,846 | 175 | 73 | 202 | |
| Samoan | 2,140 | 2,114 | 26 | -- | -- | |
| Puerto Rican | 2,128 | 1,381 | 433 | 112 | 202 | |
| Black | 1,530 | 1,409 | -- | 19 | 102 | |
| 4.43 Sex of Employed Civilians, 1980 | | | | | | |
| Female | 163,817 | 126,958 | 15,228 | 7,653 | 13,976 | |
| Male | 208,665 | 157,866 | 21,008 | 9,682 | 20,107 | |
| 4.44 Occupation By Sex, 1980 | | | | | | Data Book, 1981. "Occupation By Sex: 1980," Hawaii Department of Planning and Economic Development, 1981. |
| Female | | | | | | |
| Professional and Technical Workers | 29,105 | -- | -- | -- | -- | |
| Farmers and Farm Managers | 298 | -- | -- | -- | -- | |
| Managers, Officials, Proprietors | 14,450 | -- | -- | -- | -- | |
| Clerical Workers | 53,358 | -- | -- | -- | -- | |
| Sales Workers | 19,351 | -- | -- | -- | -- | |
| Craftsworkers and Supervisors | 2,863 | -- | -- | -- | -- | |

TABLE 3 (Cont'd)

| POPULATION CHARACTERISTICS | LATEST AVAILABLE DATA | | | | | SOURCE |
|---|---|---|---|---|---|---|
| | TOTAL | COUNTY | | | | |
| | | HONOLULU | HAWAII | KAUAI | MAUI | |
| 4.44 Occupation By Sex, 1980 (Cont'd) | | | | | | |
| Female | | | | | | |
| Operatives | 7,879 | -- | -- | -- | -- | |
| Service Workers | 38,002 | -- | -- | -- | -- | |
| Farm Laborers and Supervisors | 1,629 | -- | -- | -- | -- | |
| Laborers, Except Farm | 1,784 | -- | -- | -- | -- | |
| Occupation Not Reported | 3,486 | -- | -- | -- | -- | |
| Male | | | | | | |
| Professional and Technical Workers | 32,934 | -- | -- | -- | -- | |
| Farmers and Farm Managers | 1,710 | -- | -- | -- | -- | |
| Managers, Officials, Proprietors | 29,525 | -- | -- | -- | -- | |
| Clerical Workers | 14,780 | -- | -- | -- | -- | |
| Sales Workers | 16,302 | -- | -- | -- | -- | |
| Craftsworkers and Supervisors | 43,860 | -- | -- | -- | -- | |
| Operatives | 18,736 | -- | -- | -- | -- | |
| Service Workers | 25,698 | -- | -- | -- | -- | |
| Farm Laborers and Supervisors | 4,475 | -- | -- | -- | -- | |
| Laborers, Except Farm | 15,938 | -- | -- | -- | -- | |
| Occupation Not Reported | 2,522 | -- | -- | -- | -- | |

SECTION 5.0
TABLE 4
ENROLLMENT PROJECTIONS FOR VOCATIONAL EDUCATION
SECONDARY AND POST-SECONDARY LEVELS
FY 1983 - FY 1987

| Instructional Programs by Dept. of Education Codes | 1983 | | 1983 | | 1983 | | 1983 | | ,983 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Secondary | Post-Secondary 2/ | Secondary | Post-Secondary 2/ | Secondary | Post-Secondary 2/ | Secondary | Post-Secondary 2/ | Secondary | Post-Secondary 2/ |
| 01. Agriculture | 1,165 | 122 | 1,108 | 120 | 1,170 | 119 | 1,146 | 116 | 1,173 | 114 |
| 04. Distributive | 1,332 | 983 | 1,267 | 995 | 1,265 | 1,001 | 1,310 | 999 | 1,341 | 999 |
| 07. Health | -- | 415 | -- | 412 | -- | 412 | -- | 407 | -- | 404 |
| 09. Home Economics/ Occupational Preparation | 1,332 | -- | 1,267 | -- | 1,265 | -- | 1,310 | -- | 1,341 | -- |
| 14. Office | 9,489 | 3,107 | 9,025 | 3,173 | 9,015 | 3,217 | 9,334 | 3,232 | 9,554 | 3,259 |
| 16. Technical | 333 | 539 | 317 | 539 | 316 | 538 | 528 | 534 | 335 | 531 |
| 17. Trades and Industry | 2,997 | 4,885 | 2,859 | 4,903 | 2,847 | 4,909 | 2,948 | 4,880 | 3,017 | 4,870 |
| TOTAL | 16,648 | 10,051 | 15,843 | 10,142 | 15,815 | 10,196 | 16,376 | 10,168 | 16,761 | 10,177 |
| Special Needs and Special Funded | | | | | | | | | | |
| Disadvantaged | 1,831 | -- | 1,742 | -- | 1,740 | -- | 1,801 | -- | 1,843 | -- |
| Handicapped | 998 | -- | 950 | -- | 949 | -- | 983 | -- | 1,005 | -- |
| Cooperative Education | NA | NA | NA | -- | NA | -- | NA | -- | NA | -- |
| Work Study | 283 | -- | 269 | -- | 269 | -- | 278 | -- | 285 | -- |
| Guidance and Counseling | NA | NA | NA | -- | NA | -- | NA | -- | NA | -- |

2/ Fall Enrollments Only

Note: Data on Adult enrollments are not available

SECTION 5.0

TABLE 5

PROJECTED 5-YEAR VOCATIONAL EDUCATION ENROLLMENT BY PROGRAM
SECONDARY*
(FY 1983 - FY 1987)

| | Occupational Area | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|
| 01. | AGRICULTURE | 1165 | 1108 | 1107 | 1146 | 1173 |
| 04. | DISTRIBUTION | 1332 | 1267 | 1265 | 1310 | 1341 |
| 09. | CONSUMER AND HOMEMAKING | 1332 | 1267 | 1265 | 1310 | 1341 |
| 14. | OFFICE | 9489 | 9025 | 9015 | 9334 | 9554 |
| 16. | TECHNICAL | 333 | 317 | 316 | 328 | 335 |
| 17. | TRADES AND INDUSTRY | 2997 | 2859 | 2847 | 2948 | 3017 |

*Based on 1979-80 VEDS enrollments from the Department of Education.

SECTION 5.0

TABLE 6

PROJECTED 5-YEAR VOCATIONAL EDUCATION ENROLLMENT BY PROGRAM
SECONDARY*
(FY 1983 - FY 1987)

| | Occupational Area | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|
| 01. | AGRICULTURE | | | | | |
| .0100 | Agriculture Production Workers | 516 | 490 | 490 | 507 | 520 |
| .0500 | Ornamental Horticulture Workers | 615 | 586 | 586 | 606 | 620 |
| 04. | DISTRIBUTION | | | | | |
| .0800 | General Merchandising Workers | 1332 | 1267 | 1265 | 1310 | 1341 |
| 09. | CONSUMER AND HOMEMAKING | | | | | |
| .0201 | Care and Guidance of Children | 216 | 206 | 206 | 213 | 218 |
| .0202 | Clothing Mgt., Production and Services | 17 | 16 | 16 | 16 | 17 |
| .0203 | Food Mgt., Production and Services | 998 | 950 | 949 | 982 | 1005 |
| .0205 | Institutional and Home Mgt. and Sup. | 17 | 16 | 16 | 16 | 17 |
| 14. | OFFICE | | | | | |
| .0100 | Accounting and Computing Occupations | 3330 | 3167 | 3163 | 3275 | 3352 |
| .0299 | Other Business Data Processing | 832 | 792 | 790 | 818 | 838 |
| .0300 | Filing, Office Machines and Gen. Off. | 2830 | 2692 | 2689 | 2784 | 2849 |
| .0700 | Stenographic, Secretarial and Related | 1498 | 1425 | 1423 | 1474 | 1508 |
| .0900 | Typing and Related Occupations | 1165 | 1108 | 1107 | 1146 | 1732 |
| 16. | TECHNICAL | | | | | |
| .0107 | Electrical Technology | 33 | 32 | 32 | 33 | 34 |
| .0110 | Electronic Technology | 333 | 317 | 316 | 328 | 335 |
| 17. | TRADES AND INDUSTRY | | | | | |
| .0302 | Auto Mechanics | 1665 | 1558 | 1581 | 1638 | 1676 |
| .1099 | Other Construction and Maintenance | 666 | 633 | 633 | 650 | 670 |
| .1300 | Drafting Occupations | 166 | 158 | 158 | 163 | 167 |
| .1900 | Graphic Arts Occupations | 166 | 158 | 158 | 163 | 167 |
| .2399 | Other Metalworking Occupations | 166 | 158 | 158 | 163 | 167 |
| | DISADVANTAGED | 1831 | 1742 | 1740 | 1801 | 1843 |
| | HANDICAPPED | 998 | 950 | 949 | 983 | 1005 |
| | WORK STUDY | 283 | 269 | 269 | 278 | 285 |

*Based on 1979-80 VEDS enrollments from the Department of Education.

SECTION 5.0

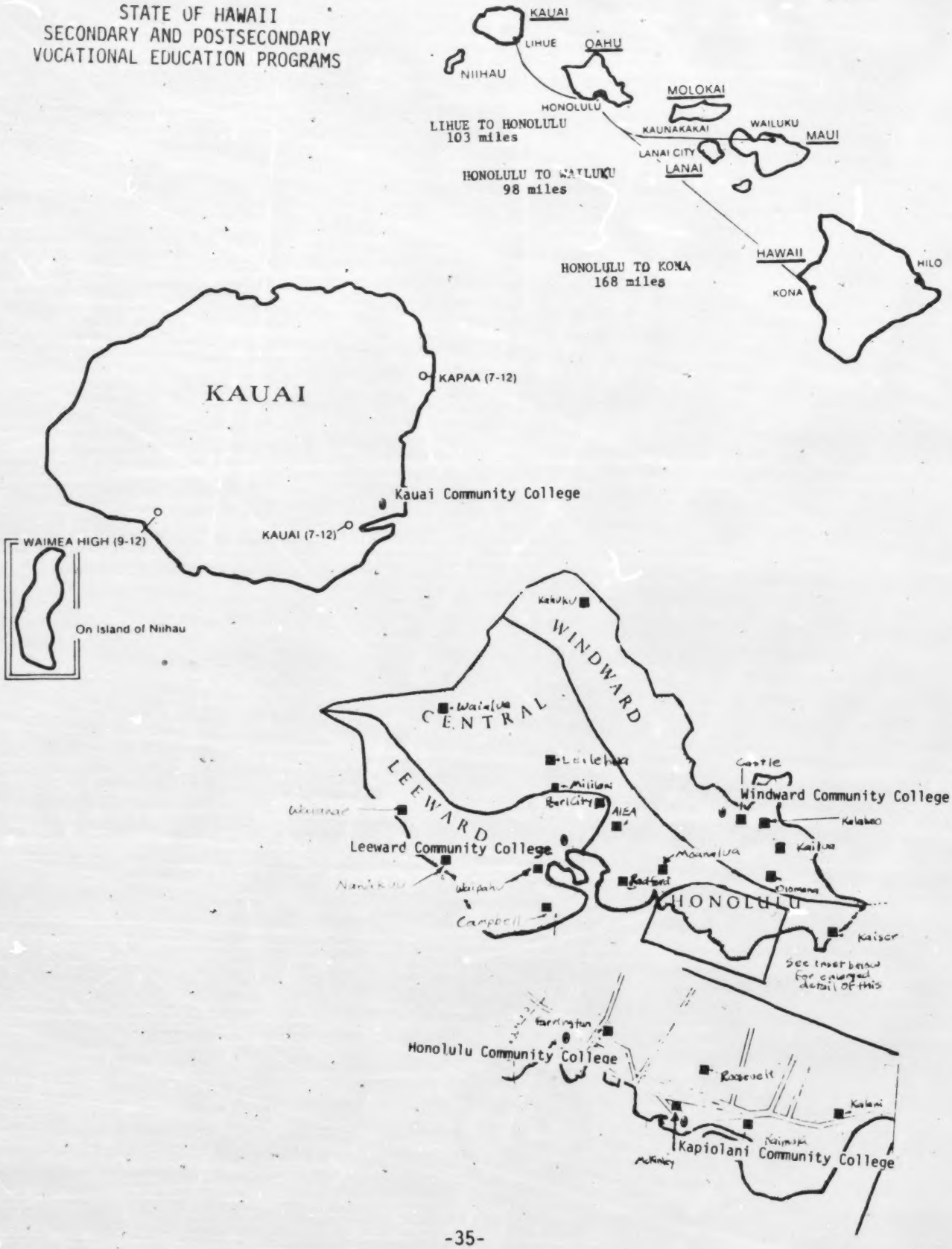
TABLE 7

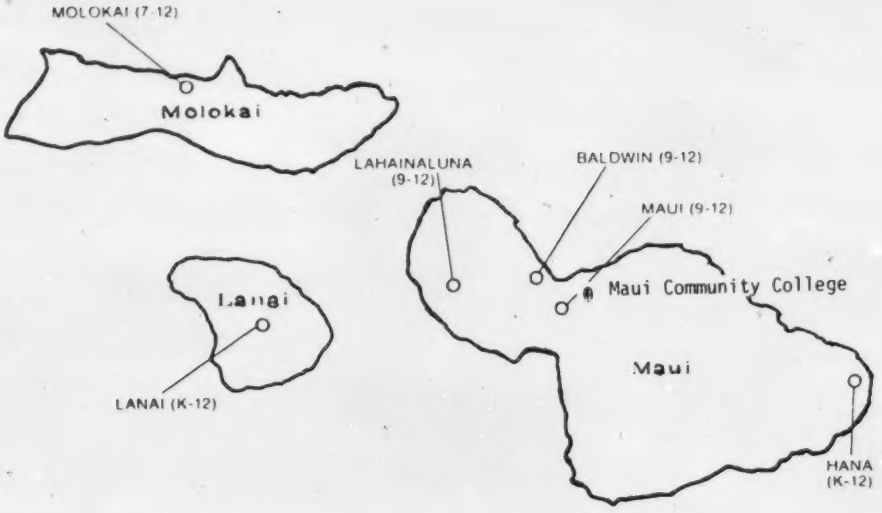
PROJECTED 5-YEAR VOCATIONAL EDUCATION ENROLLMENT BY PROGRAM
POST-SECONDARY*
(FY 1983 - FY 1987)

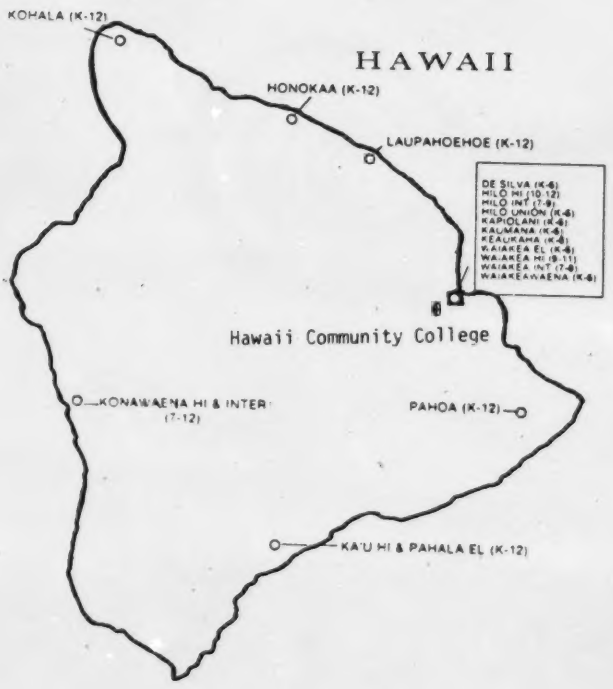
| | Occupational Area | 1983 | 1984 | 1985 | 1986 | 1987 |
|---|---|---|---|---|---|---|
| 01. | AGRICULTURE | 122 | 120 | 119 | 116 | 114 |
| .0100 | Agriculture Production Workers | 77 | 75 | 74 | 71 | 69 |
| .0500 | Ornamental Horticulture Workers | 45 | 45 | 45 | 45 | 45 |
| 04. | DISTRIBUTION | 983 | 995 | 1,001 | 999 | 999 |
| .0400 | Financial Company Workers | 27 | 32 | 37 | 41 | 45 |
| .0800 | General Merchandising Workers | 654 | 661 | 662 | 657 | 653 |
| .1100 | Hotel Workers | 302 | 302 | 302 | 301 | 301 |
| 07. | HEALTH | 415 | 412 | 412 | 407 | 404 |
| .0101 | Dental Assistants | 19 | 19 | 20 | 19 | 19 |
| .0203 | Medical Lab Technicians | 17 | 17 | 17 | 17 | 17 |
| .0301 | Nurses, Associate Degree | 113 | 111 | 112 | 110 | 110 |
| .0302 | Practical Nurses | 150 | 149 | 149 | 147 | 145 |
| .0401 | Occupational Therapy Ass'ts. | 15 | 15 | 15 | 15 | 14 |
| .0501 | Radiologic Technologists | 42 | 42 | 41 | 41 | 41 |
| .0903 | Respiratory Therapists | 17 | 17 | 17 | 17 | 17 |
| .0904 | Medical Assistants | 42 | 41 | 41 | 41 | 41 |
| 14. | OFFICE | 3,107 | 3,173 | 3,217 | 3,232 | 3,259 |
| .0100 | Accounting Workers | 860 | 885 | 903 | 913 | 925 |
| .0201 | Computer & Console Workers | 35 | 35 | 35 | 34 | 34 |
| .0203 | Programmers | 386 | 390 | 390 | 387 | 386 |
| .0300 | Gen. Office Clerical Workers | 540 | 540 | 538 | 532 | 528 |
| .0499B | Library Technicians | 20 | 21 | 21 | 21 | 21 |
| .0700 | Stenos., Sec., & Related | 817 | 852 | 881 | 903 | 925 |
| .0900 | Typists & Related | 449 | 450 | 449 | 442 | 440 |
| 16. | TECHNICAL | 539 | 539 | 538 | 534 | 531 |
| .0106 | Engineering Technicians | 47 | 46 | 46 | 46 | 46 |
| .0108 | Electronics Technicians | 377 | 376 | 374 | 370 | 367 |
| .0604 | Marine Technicians | 115 | 117 | 118 | 118 | 118 |
| 17. | TRADES AND INDUSTRY | 4,885 | 4,903 | 4,909 | 4,880 | 4,870 |
| .0301 | Auto Body Repairers | 193 | 191 | 190 | 188 | 186 |
| .0302 | Auto Mechanics | 799 | 818 | 834 | 843 | 851 |
| .0400 | Aviation Mechanics | 116 | 116 | 115 | 114 | 114 |
| .0700 | Commercial Artists | 209 | 209 | 208 | 206 | 205 |
| .1001 | Carpenters | 159 | 158 | 156 | 155 | 154 |
| .1002 | Electricians | 188 | 187 | 186 | 185 | 182 |
| .1003B | Heavy Equip. Oper. & Repairers | 107 | 106 | 104 | 102 | 101 |
| .1099K | Building Maintenance Workers | 14 | 14 | 14 | 14 | 14 |
| .1300 | Drafters | 292 | 294 | 295 | 291 | 291 |
| .1900 | Graphic Artists | 52 | 53 | 53 | 53 | 53 |
| .2302 | Machine Shop Workers | 140 | 140 | 140 | 138 | 136 |
| .2305 | Sheetmetal Workers | 47 | 46 | 46 | 46 | 46 |
| .2306 | Welders | 200 | 199 | 198 | 194 | 193 |
| .2602 | Cosmetologists | 209 | 209 | 208 | 206 | 205 |
| .2801 | Firefighters | 186 | 185 | 185 | 182 | 181 |
| .2802A | Law Enforcement Officer | 307 | 305 | 304 | 300 | 298 |
| .2899B | Recreation Workers | 138 | 140 | 142 | 142 | 142 |
| .2899F | Legal Assistants | 93 | 94 | 93 | 93 | 92 |
| .2899H | Occ. Safety & Health Inspectors | 93 | 93 | 92 | 92 | 91 |
| .2899I | Human Service Workers | 317 | 320 | 322 | 323 | 326 |
| .2901 | Commercial Bakers | 39 | 39 | 39 | 38 | 38 |
| .2902 | Cooks and Chefs | 355 | 356 | 356 | 353 | 353 |
| .2904 | Dining Room Workers | 311 | 311 | 310 | 308 | 306 |
| .3000 | Refrigeration & Air Cond. Workers | 163 | 162 | 162 | 160 | 159 |
| .3300 | Apparel & Fabric Workers | 158 | 158 | 157 | 154 | 153 |

*Fall Enrollments Only

STATE OF HAWAII
SECONDARY AND POSTSECONDARY
VOCATIONAL EDUCATION PROGRAMS




MOLOKAI (7-12)
Molokai
LAHAINALUNA (9-12)
BALDWIN (9-12)
MAUI (9-12)
Maui Community College
Lanai
Maui
LANAI (K-12)
HANA (K-12)


KOHALA (K-12)
HAWAII
HONOKAA (K-12)
LAUPAHOEHOE (K-12)
DE SILVA (K-6)
MILO HI (10-12)
MILO INT (7-9)
MILO UNION (K-6)
KAPIOLANI (K-6)
KALMANA (K-6)
KEAUKAHA (K-6)
WAIAKEA EL (K-6)
WAIAKEA HI (9-11)
WAIAKEA INT (7-8)
WAIAKEAWAENA (K-6)
Hawaii Community College
KONAWAENA HI & INTER (7-12)
PAHOA (K-12)
KA'U HI & PAHALA EL (K-12)

PROGRAM OFFERINGS BY HIGH SCHOOLS

County: Hawaii

District: Hawaii

School: Hilo

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Building Construction Technology
- 1.2 Power Automotive

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Agricultural Business
- 2.2 Ornamental Horticulture
- 2.3 Office
- 2.4 Distributive
- 2.5 Electronic
- 2.6 Building Construction Technology
- 2.7 Power Automotive

3.0 Program: Occupational Skills

Curricula:
- 3.1 Ground Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 H/M House
- 3.6 Supervised Food Service
- 3.7 Construction Tender
- 3.8 General Mechanical

School: Honokaa

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Power Automotive

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Office
- 2.2 Distributive
- 2.3 Power Automotive

3.0 Program: Occupational Skills

Curricula:
- 3.1 Ground Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 H/M House
- 3.6 Supervised Food Service
- 3.7 Construction Tender
- 3.8 General Mechanical

School: Ka'u

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Building Construction Technology

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Agricultural Business
- 2.2 Ornamental Horticulture
- 2.3 Office
- 2.4 Building Construction Technology
- 2.5 Power Automotive

3.0 Program: Occupational Skills

Curricula:
- 3.1 Ground Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 H/M House
- 3.5 Supervised Food Service
- 3.6 Construction Tender
- 3.7 General Mechanical

School: Kohala

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Agricultural Business
- 1.2 Power Automotive

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Agricultural Business
- 2.2 Ornamental Horticulture
- 2.3 Office
- 2.4 Building Construction Technology
- 2.5 Power Automotive

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Ground Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | H/M House |
| 3.6 | Supervised Food Service |
| 3.7 | Construction Tender |
| 3.8 | General Mechanical |

School: Konawaena

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Agricultural Business |
| 1.2 | Ornamental Horticulture |
| 1.3 | Office |
| 1.4 | Distributive |
| 1.5 | Food Service |
| 1.6 | Building Construction Technology |
| 1.7 | Power Automotive |
| 1.8 | Metal Technology |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Ornamental Horticulture |
| 2.3 | Office |
| 2.4 | Distributive |
| 2.5 | Food Service |
| 2.6 | Building Construction Technology |
| 2.7 | Power Automotive |
| 2.8 | Metal Technology |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Ground Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | H/M House |
| 3.6 | Supervised Food Service |
| 3.7 | Construction Tender |
| 3.8 | General Mechanical |

School: Laupahoehoe

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Office |
| 2.3 | Building Construction Technology |
| 2.4 | Power Automotive |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Ground Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Supervised Food Service |
| 3.5 | Construction Tender |
| 3.6 | General Mechanical |

School: Pahoa

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.0 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Office |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Ground Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | H/M House |
| 3.6 | Supervised Food Service |
| 3.7 | Construction Tender |
| 3.8 | General Mechanical |

School: Waiakea

1.0 Program: Pre-Industrial Preparation

Curricula:
(No program)

2.0 Program: Introduction to Vocations

Curricula:
(No program)

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | General Distributive |
| 3.2 | H/M House |
| 3.3 | Supervised Food Service |
| 3.4 | Construction Tender |
| 3.5 | General Mechanical |

County: Honolulu

District: Honolulu

School: Farrington

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Child Care |
| 1.2 | Food Service |
| 1.3 | Building Construction Technology |
| 1.4 | Power Automotive |
| 1.5 | Metal Technology |
| 1.6 | Graphic Arts |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Office |
| 2.2 | Distributive |
| 2.3 | Food Service |
| 2.4 | Electronic |
| 2.5 | Building Construction Technology |
| 2.6 | Power Automotive |
| 2.7 | Metal Technology |
| 2.8 | Graphic Arts |
| 2.9 | Drafting |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Clothes Maintenance |
| 3.6 | H/M House |
| 3.7 | Supervised Food Service |
| 3.8 | Construction Tender |
| 3.9 | General Mechanical |

County: Honolulu

District: Honolulu

School: Kaimuki

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Building Construction Technology |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Office |
| 2.2 | Distributive |
| 2.3 | Child Care |
| 2.4 | Food Service |
| 2.5 | Electronic |
| 2.6 | Building Construction Technology |
| 2.7 | Power Automotive |
| 2.8 | Metal Technology |
| 2.9 | Graphic Arts |
| 2.10 | Drafting |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Clothes Maintenance |
| 3.6 | H/M House |
| 3.7 | Nurse Aide |
| 3.8 | Supervised Food Service |
| 3.9 | Construction Tender |
| 3.10 | General Mechanical |

County: Honolulu

District: Honolulu

School: Kalani

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Electrical |
| 1.2 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Office |
| 2.2 | Distributive |
| 2.3 | Child Care |
| 2.4 | Electronics |
| 2.5 | Building Construction Technology |
| 2.6 | Power Automotive |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Clothes Maintenance |
| 3.6 | H/M House |
| 3.7 | Supervised Food Service |
| 3.8 | Construction Tender |
| 3.9 | General Mechanical |

County: Honolulu

District: Honolulu

School: McKinley

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Food Service |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Ornamental Horticulture |
| 2.2 | Office |
| 2.3 | Distributive |
| 2.4 | Child Care |
| 2.5 | Food Service |
| 2.6 | Electronic |
| 2.7 | Power Automotive |
| 2.8 | Graphic Arts |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Clothes Maintenance |
| 3.6 | H/M House |
| 3.7 | Supervised Food Service |
| 3.8 | Construction Tender |
| 3.9 | General Mechanical |

County: Honolulu

District: Honolulu

School: Roosevelt

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Office |
| 2.2 | Distributive |
| 2.3 | Electronic |
| 2.4 | Building Construction Technology |
| 2.5 | Power Automotive |
| 2.6 | Drafting |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Supervised Food Service |
| 3.5 | Construction Tender |
| 3.6 | General Mechanical |

County: Honolulu

District: Honolulu

School: Kaiser

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Graphic Arts

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Office
- 2.2 Building Construction Technology
- 2.3 Power Automotive
- 2.4 Graphic Arts
- 2.5 Drafting

3.0 Program: Occupational Skills

Curricula:
- 3.1 Grounds Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 Clothes Maintenance
- 3.6 H/M House
- 3.7 Supervised Food Service
- 3.8 Construction Tender
- 3.9 General Mechanical

County: Honolulu

District: Central

School: Aiea

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Office
- 1.2 Electrical

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Office
- 2.2 Distributive
- 2.3 Electronic

3.0 Program: Occupational Skills

Curricula:
- 3.1 Grounds Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 Home Service
- 3.6 H/M House
- 3.7 Supervised Food Service
- 3.8 Construction Tender
- 3.9 General Mechanical

County: Honolulu

District: Central

School: Leilehua

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Graphic Arts

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Agricultural Business
- 2.2 Ornamental Horticulture
- 2.3 Office
- 2.4 Distributive
- 2.5 Building Construction Technology
- 2.6 Graphic Arts

3.0 Program: Occupational Skills

Curricula:
- 3.1 Grounds Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 H/M House
- 3.6 Supervised Food Service
- 3.7 Construction Tender
- 3.8 General Mechanical

County: Honolulu

District: Central

School: Mililani

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Building Construction Technology

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Office

3.0 Program: Occupational Skills

Curricula:
- 3.1 Grounds Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Construction Tender
- 3.5 General Mechanical

County: Honolulu

District: Central

School: Moanalua

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Building Construction Technology

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Office

3.0 Program: Occupational Skills

Curricula:
- 3.1 Grounds Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Construction Tender
- 3.5 General Mechanical

County: Honolulu

District: Central

School: Radford

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Office

2.0 Program: Introduction to Vocations

Curricula.
- 2.1 Ornamental Horticulture
- 2.2 Office
- 2.3 Distributive
- 2.4 Electrical
- 2.5 Building Construction Technology
- 2.6 Power Automotive
- 2.7 Drafting

3.0 Program: Occupational Skills

Curricula:
- 3.1 Grounds Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Supervised Food Service
- 3.5 Construction Tender
- 3.6 General Mechanical

County: Honolulu

District: Central

School: Waialua

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Agricultural Business
- 1.2 Ornamental Horticulture
- 1.3 Food Service
- 1.4 Power Automotive

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Agricultural Business
- 2.2 Ornamental Horticulture
- 2.3 Office
- 2.4 Distributive
- 2.5 Food Service
- 2.6 Building Construction Technology
- 2.7 Power Automotive

3.0 Program: Occupational Skills

Curricula:
- 3.1 Grounds Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 Clothes Maintenance
- 3.6 H/M House
- 3.7 Supervised Food Service
- 3.8 Construction Tender
- 3.9 General Mechanical

County: Honolulu

District: Leeward

School: Campbell

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Building Construction Technology

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Office
- 2.2 Distributive
- 2.3 Electronic
- 2.4 Building Construction Technology
- 2.5 Power Automotive
- 2.6 Graphic Arts
- 2.7 Drafting

3.0 Program: Occupational Skills

Curricula:
- 3.1 Grounds Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 Home Service
- 3.6 Clothes Maintenance
- 3.7 H/M House
- 3.8 Supervised Food Service
- 3.9 Construction Tender
- 3.10 General Mechanical

County: Honolulu

District: Leeward

School: Nanakuli

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Power Automotive
- 1.2 Graphic Arts

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Ornamental Horticulture
- 2.2 Office
- 2.3 Food Service
- 2.4 Electronic
- 2.5 Power Automotive
- 2.6 Metal Technology
- 2.7 Graphic Arts

3.0 Program: Occupational Skills

Curricula:
- 3.1 Grounds Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 Home Service
- 3.6 Clothes Maintenance
- 3.7 H/M House
- 3.8 Supervised Food Service
- 3.9 Construction Tender
- 3.10 General Mechanical

County: Honolulu

District: Leeward

School: Waipahu

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Metal Technology

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Ornamental Horticulture |
| 2.3 | Office |
| 2.4 | Distributive |
| 2.5 | Food Service |
| 2.6 | Electronic |
| 2.7 | Power Automotive |
| 2.8 | Drafting |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Home Service |
| 3.6 | Clothes Maintenance |
| 3.7 | H/M House |
| 3.8 | Supervised Food Service |
| 3.9 | Construction Tender |
| 3.10 | General Mechanical |

County: Honolulu

District: Leeward

School: Waianae

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Office |
| 1.2 | Distributive |
| 1.3 | Food Service |
| 1.4 | Power Automotive |
| 1.5 | Metal Technology |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Ornamental Horticulture |
| 2.2 | Office |
| 2.3 | Distributive |
| 2.4 | Food Service |
| 2.5 | Electronic |
| 2.6 | Building Construction Technology |
| 2.7 | Power Automotive |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Home Service |
| 3.6 | H/M House |
| 3.7 | Supervised Food Service |
| 3.8 | Construction Tender |
| 3.9 | General Mechanical |

County: Honolulu

District: Leeward

School: Pearl City

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Office |
| 2.2 | Distributive |
| 2.3 | Electronic |
| 2.4 | Building Construction Technology |
| 2.5 | Power Automotive |
| 2.6 | Metal Technology |
| 2.7 | Graphic Arts |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Home Service |
| 3.6 | Clothes Maintenance |
| 3.7 | H/M House |
| 3.8 | Supervised Food Service |
| 3.9 | Construction Tender |
| 3.10 | General Mechanical |

County: Honolulu

District: Windward

School: Castle

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Building Construction Technology |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Ornamental Horticulture |
| 2.3 | Office |
| 2.4 | Distributive |
| 2.5 | Child Care |
| 2.6 | Electronic |
| 2.7 | Power Automotive |
| 2.8 | Metal Technology |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Clothes Maintenance |
| 3.6 | H/M House |
| 3.7 | Nurse Aide |
| 3.8 | Supervised Food Service |
| 3.9 | Construction Tender |
| 3.10 | General Mechanical |

County: Honolulu

District: Windward

School: Kahuku

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Agricultural Business |
| 1.2 | Building Construction Technology |
| 1.3 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Ornamental Horticulture |
| 2.3 | Office |
| 2.4 | Building Construction Technology |
| 2.5 | Power Automotive |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Clothes Maintenance |
| 3.6 | H/M House |
| 3.7 | Supervised Food Service |
| 3.8 | Construction Tender |
| 3.9 | General Mechanical |

County: Honolulu

District: Windward

School: Kailua

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Ornamental Horticulture |
| 2.2 | Office |
| 2.3 | Distributive |
| 2.4 | Food Service |
| 2.5 | Electronic |
| 2.6 | Building Construction Technology |
| 2.7 | Power Automotive |
| 2.8 | Metal Technology |
| 2.9 | Graphic Arts |
| 2.10 | Drafting |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Clothes Maintenance |
| 3.6 | H/M House |
| 3.7 | Supervised Food Service |
| 3.8 | Construction Tender |
| 3.9 | General Mechanical |

County: Honolulu

District: Windward

School: Kalaheo

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Office |
| 2.2 | Distributive |
| 2.3 | Electronic |
| 2.4 | Building Construction Technology |
| 2.5 | Power Automotive |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Grounds Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | Clothes Maintenance |
| 3.6 | H/M House |
| 3.7 | Supervised Food Service |
| 3.8 | Construction Tender |
| 3.9 | General Mechanical |

County: Kauai

District: Kauai

School: Kapaa

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Ornamental Horticulture |
| 2.3 | Office |
| 2.4 | Food Service |
| 2.5 | Electronic |
| 2.6 | Building Construction Technology |
| 2.7 | Power Automotive |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Ground Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | H/M House |
| 3.6 | Supervised Food Service |
| 3.7 | Construction Tender |
| 3.8 | General Mechanical |

School: Kauai

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Office |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Ornamental Horticulture |
| 2.3 | Office |
| 2.4 | Distributive |
| 2.5 | Building Construction Technology |
| 2.6 | Power Automotive |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Ground Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | H/M House |
| 3.6 | Supervised Food Service |
| 3.7 | Construction Tender |
| 3.8 | General Mechanical |

School: Waimea

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Ornamental Horticulture |
| 2.3 | Office |
| 2.4 | Distributive |
| 2.5 | Building Construction Technology |
| 2.6 | Power Automotive |
| 2.7 | Metal Technology |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Ground Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | H/M House |
| 3.6 | Supervised Food Service |
| 3.7 | Construction Tender |
| 3.8 | General Mechanical |

County: Maui

District: Maui

School: Baldwin

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Building Construction Technology |
| 1.2 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Ornamental Horitculture |
| 2.3 | Office |
| 2.4 | Distributive |
| 2.5 | Power Automotive |

3.0 Program: Occupational Skills

Curricula:

| | |
|---|---|
| 3.1 | Ground Maintenance |
| 3.2 | General Office |
| 3.3 | General Distributive |
| 3.4 | Child Care |
| 3.5 | H/M House |
| 3.6 | Supervised Food Service |
| 3.7 | Construction Tender |
| 3.8 | General Mechanical |

School: Hana

1.0 Program: Pre-Industrial Preparation

Curricula:
(No Program)

2.0 Program: Introduction to Vocations

Curricula:

| | |
|---|---|
| 2.1 | Agricultural Business |
| 2.2 | Office |
| 2.3 | Food Service |
| 2.4 | Building Construction Technology |

3.0 Program: Occupational Skills

Curricula:
(No Program)

School: Lahainaluna

1.0 Program: Pre-Industrial Preparation

Curricula:

| | |
|---|---|
| 1.1 | Agricultural Business |
| 1.2 | Ornamental Horticulture |
| 1.3 | Building Construction Technology |
| 1.4 | Power Automotive |

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Agricultural Business
- 2.2 Ornamental Horticulture
- 2.3 Office
- 2.4 Distributive
- 2.5 Building Construction Technology
- 2.6 Power Automotive

3.0 Program: Occupational Skills

Curricula:
- 3.1 Ground Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 H/M House
- 3.6 Supervised Food Service
- 3.7 Construction Tender
- 3.8 General Mechanical

School: Lanai

1.0 Program: Pre-Industrial Preparation

Curricula:
(No Program)

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Office
- 2.2 Building Construction Technology
- 2.3 Power Automotive

3.0 Program: Occupational Skills

Curricula:
(No Program)

School: Maui

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Power Automotive

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Ornamental Horticulture
- 2.2 Office
- 2.3 Distributive
- 2.4 Power Automotive

3.0 Program: Occupational Skills

Curricula:
- 3.1 Ground Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 H/M House
- 3.6 Supervised Food Service
- 3.7 Construction Tender
- 3.8 General Mechanical

School: Molokai

1.0 Program: Pre-Industrial Preparation

Curricula:
- 1.1 Building Construction Technology

2.0 Program: Introduction to Vocations

Curricula:
- 2.1 Agricultural Business
- 2.2 Ornamental Horticulture
- 2.3 Office
- 2.4 Building Construction Technology

3.0 Program: Occupational Skills

Curricula:
- 3.1 Ground Maintenance
- 3.2 General Office
- 3.3 General Distributive
- 3.4 Child Care
- 3.5 H/M House
- 3.6 Supervised Food Service
- 3.7 Construction Tender
- 3.8 General Mechanical

PROGRAM OFFERINGS BY COMMUNITY COLLEGES

County: Hawaii

Campus: Hawaii Community College

Number of Programs
and Program Options: 25

1.0 Program: Agriculture

Curricula:
1.1 Agriculture Production

2.0 Program: Business/Distributive

Curricula:
2.1 Accounting
2.2 Computer Operations
2.3 General Clerical
2.4 Keypunching
2.5 Merchandising/
Middle Management
2.6 Programmer
2.7 Secretarial Science

3.0 Program: Personal/Public Service

Curricula:
3.1 Apparel Design
3.2 Fire Science
3.3 Nursery School
3.4 Police Science

4.0 Program: Health

Curricula:
4.1 Nurses Aide
4.2 Nursing (A.S.)
4.3 Practical Nursing

5.0 Program: Food Service

Curricula:
5.1 Food Service

6.0 Program: Electrical/Electronics

Curricula:
6.1 Electricity
6.2 Electronics

7.0 Program: Construction/Civil Technician

Curricula:
7.1 Carpentry
7.2 Welding and Sheet Metal

8.0 Program: Mechanical

Curricula:
8.1 Automotive Body Repair
and Painting
8.2 Automotive Mechanics
8.3 Diesel Mechanics
8.4 Machine Technology

9.0 Program: Technical/Graphic

Curricula:
9.1 Drafting

County: Hawaii

Campus: Honolulu Community College

Number of Programs
and Program Options: 34

1.0 Program: Agriculture

Curricula:
(No Program)

2.0 Program: Business/Distributive

Curricula:
2.1 General Clerical
2.2 Interpreting for Deaf People

3.0 Program: Personal/Public Service

Curricula:

| | |
|---|---|
| 3.1 | Child Development |
| 3.2 | Community Service |
| 3.3 | Corrections |
| 3.4 | Cosmetology |
| 3.5 | Early Childhood Education |
| 3.6 | Educational Assistant |
| 3.7 | Elderly Services |
| 3.8 | Fashion Design |
| 3.9 | Fire Science |
| 3.91 | Industrial Education |
| 3.92 | Occupational Safety and Health |
| 3.93 | Police Science |

4.0 Program: Health

Curricula:
(No Programs)

5.0 Program: Food Service

Curricula:

| | |
|---|---|
| 5.1 | Commercial Baking |

6.0 Program: Electrical/Electronics

Curricula:

| | |
|---|---|
| 6.1 | Biomedical |
| 6.2 | Electrical Communications |
| 6.3 | Engineering Aide |
| 6.4 | Industrial Electronics |

7.0 Program: Construction/Civil Technician

Curricula:

| | |
|---|---|
| 7.1 | Carpentry |
| 7.2 | Sheet Metal and Plasters |
| 7.3 | Welding |

8.0 Program: Mechanical

Curricula:

| | |
|---|---|
| 8.1 | Applied Trades |
| 8.2 | Automotive Body Repair and Painting |
| 8.3 | Automotive Mechanics |
| 8.4 | Aviation Maintenance |
| 8.5 | Heavy Equipment Maintenance and Repair |
| 8.6 | Inside Machinist |
| 8.7 | Machine Shop |
| 8.8 | Marine Machinist |
| 8.9 | Marine Pipefitter |
| 8.91 | Refrigeration and Air Conditioning |

9.0 Program: Technical/Graphic

Curricula:

| | |
|---|---|
| 9.1 | Architectural Drafting |
| 9.2 | Commercial Art |

County: Honolulu

Campus: Kapiolani Community College

Number of Programs and Program Options: 31

1.0 Program: Agriculture

Curricula:
(No Program)

2.0 Program: Business/Distributive

Curricula:

| | |
|---|---|
| 2.1 | Accounting |
| 2.2 | Bookkeeping |
| 2.3 | Computer Operator |
| 2.4 | Data Entry |
| 2.5 | Data Processing |
| 2.6 | Data Processing Operations |
| 2.7 | General Clerical |
| 2.8 | Hotel Operations |
| 2.9 | Legal Secretary |
| 2.91 | Medical Secretary |
| 2.92 | Merchandising/ Middle Management |
| 2.93 | Quality Control Clerk |
| 2.94 | Sales and Cashier |
| 2.95 | Sales and Marketing |
| 2.96 | Secretary |
| 2.97 | Stenography |

3.0 Program: Personal/Public Service

Curricula:

| | |
|---|---|
| 3.1 | Legal Assistant |

4.0 Program: Health

Curricula:

| | |
|---|---|
| 4.1 | Dental Assisting |
| 4.2 | Medical Assisting |
| 4.3 | Medical Laboratory Technician |
| 4.4 | Nurses Aide |
| 4.5 | Occupational Therapy Assistant |
| 4.6 | Practical Nursing |
| 4.7 | Radiologic Technician |
| 4.8 | Respiratory Therapy |

5.0 Program: Food Service

Curricula:
- 5.1 Cold Food Pantry
- 5.2 Culinary Arts
- 5.3 Dining Room Operations
- 5.4 Food Service
- 5.5 Short Order Cooking
- 5.6 Store Room Operations

6.0 Program: Electrical/Electronics

Curricula:
(No Program)

7.0 Program: Construction/ Civil Technician

Curricula:
(No Program)

8.0 Program: Mechanical

Curricula:
(No Program)

9.0 Program: Technical/Graphic

Curricula:
(No Program)

County: Honolulu

Campus: Leeward Community College

Number of Programs and Program Options: 17

1.0 Program: Agriculture

Curricula:
(No Program)

2.0 Program: Business/Distributive

Curricula:
- 2.1 Accounting
- 2.2 Banking
- 2.3 Clerk-Stenographer Typist
- 2.4 Computer Science
- 2.5 Credit Union
- 2.6 Retailing
- 2.7 Secretarial Science
- 2.8 Supervision and Management

3.0 Program: Personal/Public Service

Curricula:
- 3.1 Creative Arts
- 3.2 Games and Sports
- 3.3 Library Technology
- 3.4 Outdoor Recreation

4.0 Program: Health

Curricula:
(No Program)

5.0 Program: Food Service

Curricula:
- 5.1 Food Service

6.0 Program: Electrical/Electronics

Curricula:
(No Program)

7.0 Program: Construction/Civil Technician

Curricula:
(No Program)

8.0 Program: Mechanical

Curricula:
- 8.1 Automotive Mechanics
- 8.2 Marine Technology

9.0 Program: Technical/Graphics

Curricula:
- 9.1 Architectural Drafting
- 9.2 Graphic Arts

County: Honolulu

Campus: Windward Community College

Number of Programs and Program Options: 8

1.0 Program: Agriculture

Curricula:
(No Program)

2.0 Program: Business/Distributive

Curricula:
- 2.1 Accounting
- 2.2 Clerical-Stenography
- 2.3 Clerical-Typing
- 2.4 Finance
- 2.5 Secretarial Science
- 2.6 Stenography

3.0 Program: Personal/Public Service

Curricula:
- 3.1 Social Justice

4.0 Program: Health

Curricula:
(No Program)

5.0 Program: Food Service

Curricula:
(No Program)

6.0 Program: Electrical/Electronics

Curricula:
(No Program)

7.0 Program: Construction/Civil Technician

Curricula:
(No Program)

8.0 Progam: Mechanical

Curricula:
- 8.1 Automotive Mechanic

9.0 Program: Technical/Graphic

Curricula:
(No Program)

County: Kauai

Campus: Kauai Community College

Number of Programs and Program Options: 13

1.0 Program: Agriculture

Curricula:
(No Program)

2.0 Program: Business/Distributive

Curricula:
- 2.1 Accounting
- 2.2 Clerical
- 2.3 Management
- 2.4 Merchandising
- 2.5 Secretarial Science

3.0 Program: Personal/Public Service

Curricula:
- 3.1 Fire Science
- 3.2 Police Science

4.0 Program: Health

Curricula:
- 4.1 Nursing (A.S.)
- 4.2 Practical Nursing

5.0 Program: Food Service

Curricula:
(No Program)

6.0 Program: Electrical/Electronics

Curricula:
(No Program)

7.0 Program: Construction/Civil Technician

Curricula:
- 7.1 Construction

8.0 Program: Mechanical

Curricula:
- 8.1 Automotive Body Repair and Painting
- 8.2 Automotive Mechanics

9.0 Program: Technical/Graphic

Curricula:
9.1 Drafting

County: Maui

Campus: Maui Community College

Number of Programs
and Program Options: 22

1.0 Program: Business/Distributive

Curricula:
1.1 Nursing and Floral Management
1.2 Horticulture and Landscape Management
1.3 Nursery Management
1.4 Vegetable Management

2.0 Program: Business/Distributive

Curricula:
2.1 Accounting
2.2 Distributive
2.3 General Office
2.4 Hotel Operations
2.5 Secretarial Science

3.0 Program: Personal/Public Service

Curricula:
3.1 Apparel Design
3.2 Educational Assistant
3.3 Health Aide
3.4 Police Science
3.5 Social Service Aide

4.0 Program: Health

Curricula
4.1 Nursing (A.S.)
4.2 Practical Nursing

5.0 Program: Food Service

Curricula:
5.1 Food Service

6.0 Program: Electrical/Electronics

Curricula:
(No Program)

7.0 Program: Construction/Civil Technician

Curricula:
7.1 Building Maintenance
7.2 Carpentry
7.3 Welding

8.0 Program: Mechanical

Curricula:
8.1 Automotive Body Repair and Painting

9.0 Program: Technical/Graphic

Curricula:
9.1 Drafting

## BUDGET SUMMARY EXPLANATION

Recently a good deal of attention has been given to the concept of "zero based budgeting." Essentially zero based budgeting works on the assumption that no program has the right to perpetuity or is inherently valid. All programs are subject to review and reexamination during each budget cycle. In the real world such disinterest and objectivity is rarely achieved. Given the fact that most programs in education involve a high percentage of personnel costs and the attendant commitments, it is difficult to abruptly "stop-out" programmatic efforts. As the result, budgets do have a tendency to be incremental and to reflect trends. Any planning effort which ignored the allotment pattern which had preceded it would be remiss.

The federal program for vocational education requires that any instructional offering or program element be reflected in the State Plan. As the consequence, some ideas and planning components are included in those sections of the budget detail even though there is little likelihood of them ever being implemented. Although the actual award to the State is invariably different from the State Plan budget, time and other constraints often preclude a revision to the budget to reflect the award amount. However, the allocation to the agencies is based on the actual award.

The budget summary is provided for the most recent year as it gives the most accurate holistic picture as to how funds are distributed and utilized. The table is fairly self-explanatory. The first column delineates the funds in terms of the various subparts of the act. The largest portion is the basic grant or subpart 2. Subpart 3 is for program improvement, subpart 4 for special programs, subpart 5 for consumer and homemaking and 102d for administration.

The other columns represent the purposes according to secondary, postsecondary, adult and state board activities. Federal and state monies are anticipated and depicted separately and aggregated in the final column.

SECTION 8.0

TABLE 8
SUMMARY OF FEDERAL AND STATE FUNDS FOR VOCATIONAL EDUCATION
FY 1980-81

| | Secondary | | Postsecondary | | Adult | | State Board | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Federal | State | Federal | State | Federal | State | Federal | State | Federal | State | Total |
| SUBPART 2 - BASIC GRANT | | | | | | | | | | | |
| Voc Ed Programs | | | | | | | | | | | |
| Handicapped | 285,298 | 357,098 | 94,324 | 7,483 | ** | - | - | - | 379,622 | 364,581 | 744,203 |
| Disadvantaged | 280,842 | 785,839 | 99,215 | 135,791 | 59,947 | 84,576 | - | - | 440,004 | 1,006,206 | 1,446,210 |
| Limited English-Speaking | - | - | 17,844 | 15,876 | - | - | - | - | 17,844 | 15,876 | 33,720 |
| Other Programs | 372,839 | 2,502,334 | 709,442 | 5,367,480 | 120,373 | 1,465,442 | - | - | 1,202,654 | 9,335,256 | 10,537,910 |
| 1. Voc Ed Programs - Total | 938,979 | 3,645,271 | 920,825 | 5,526,630 | 180,320 | 1,550,018 | - | - | 2,040,124 | 10,721,919 | 12,762,043 |
| 2. Work-Study | 52,601 | 49,632 | - | - | - | - | - | - | 52,601 | 49,632 | 102,233 |
| 3. Cooperative Education | 119,724 | - | 160,972 | 199,929 | - | - | - | - | 280,696 | 199,929 | 480,625 |
| 4. Equity Incentives | - | - | - | - | - | - | 1,500 | - | 1,500 | - | 1,500 |
| 5. Sex Bias - Elimination | - | - | - | - | - | - | 50,000 | - | 50,000 | - | 50,000 |
| 6. Special Services - Homemakers | - | - | 23,883 | 25,641 | - | - | - | - | 23,883 | 25,641 | 49,524 |
| Subtotal - Subpart 2 | 1,111,304 | 3,694,903 | 1,105,680 | 5,752,200 | 180,320 | 1,550,018 | 51,500 | - | 2,448,804 | 10,997,121 | 13,445,925 |
| 7. Administration | 46,200 | 144,286 | 107,369 | 207,586 | - | - | 94,178 | 126,078 | 247,746 | 477,950 | 725,696 |
| Total - Subpart 2 | 1,157,504 | 3,839,189 | 1,213,048 | 5,959,786 | 180,320 | 1,550,018 | 145,678 | 126,078 | 2,696,550 | 11,475,071 | 14,171,621 |
| SUBPART 3 - PROGRAM IMPROVEMENT & SUPPORTIVE SERVICES | | | | | | | | | | | |
| Guidance & Counseling | | | | | | | | | | | |
| Handicapped | - | * | * | * | - | - | - | - | * | * | * |
| Disadvantaged | 38,243 | * | * | * | - | - | - | - | * | * | * |
| Others | 328,530 | * | * | * | - | - | 43,185 | - | * | * | * |
| 1. Guidance & Counseling - Total | 366,773 | 351,946 | 144,755 | 58,672 | - | - | 43,185 | - | 554,713 | 410,618 | 965,331 |
| 2. Research, Exemplary, Curriculum Development | - | - | - | - | - | - | 43,000 | - | 43,000 | - | 43,000 |
| 3. Personnel Development | 48,485 | 26,416 | 30,908 | - | - | - | 60,612 | 38,010 | 140,005 | 64,426 | 204,431 |
| Subtotal - Subpart 3 | 415,258 | 378,362 | 175,663 | 58,672 | - | - | 146,797 | 38,010 | 737,718 | 475,044 | 1,212,762 |
| 4. Administration | 11,550 | - | 26,842 | - | - | - | 23,544 | - | 61,936 | - | 61,936 |
| Total - Subpart 3 | 426,808 | 378,362 | 202,505 | 58,672 | - | - | 170,341 | 38,010 | 799,654 | 475,044 | 1,274,698 |
| SUBPART 4 - SPECIAL PROGRAMS | 109,200 | - | - | - | - | - | - | - | 109,200 | - | 109,200 |
| SUBPART 5 - CONSUMER & HOMEMAKING | | | | | | | | | | | |
| Educational Programs | | | | | | | | | | | |
| Disadvantaged | 59,299 | 415,916 | - | - | 23,273 | - | - | - | 82,572 | 415,916 | 498,488 |
| Others | 80,741 | 708,182 | - | - | - | 21,000 | - | - | 80,741 | 729,182 | 809,923 |
| 1. Educ. Programs - Total | 140,040 | 1,124,098 | - | - | 23,273 | 21,000 | - | - | 163,313 | 1,145,098 | 1,308,411 |
| 2. Ancillary Services | 20,228 | - | - | - | - | - | - | - | 20,228 | - | 20,228 |
| Total - Subpart 5 | 160,268 | 1,124,098 | - | - | 23,273 | 21,000 | - | - | 183,541 | 1,145,098 | 1,328,639 |
| SECTION 102d - ADMINISTRATION | - | - | - | - | - | - | 19,226 | - | 19,226 | - | 19,226 |
| TOTAL | 1,853,780 | 5,341,649 | 1,415,553 | 6,018,458 | 203,593 | 1,571,018 | 335,245 | 164,088 | 3,808,171 | 13,095,213 | 16,903,384 |

*Included in Total
**Included in Postsecondary

SECTION 8.0

TABLE 9

SUMMARY OF FEDERAL AND STATE FUNDS FOR VOCATIONAL EDUCATION
FY 1981-82

| | Secondary | | Postsecondary | | Adult | | State Board | | Total | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Federal | State | Federal | State | Federal | State | Federal | State | Federal | State | Total |
| SUBPART 2 - BASIC GRANT | | | | | | | | | | | |
| Voc Ed Programs | | | | | | | | | | | |
| Handicapped | 299,563 | 374,952 | 92,218 | 7,170 | ** | - | - | - | 391,781 | 382,122 | 773,903 |
| Disadvantaged | 294,883 | 825,130 | 108,935 | 144,220 | 62,539 | 112,982 | - | - | 466,357 | 1,082,332 | 1,548,689 |
| Limited English-Speaking | - | - | 21,665 | 16,543 | - | - | - | - | 21,665 | 16,543 | 38,208 |
| Other Programs | 391,480 | 2,627,450 | 525,310 | 5,814,964 | 116,694 | 1,571,274 | - | - | 1,033,484 | 10,013,688 | 11,047,172 |
| 1. Voc. Ed. Programs - Total | 985,926 | 3,827,532 | 748,128 | 5,982,897 | 179,233 | 1,684,256 | - | - | 1,913,287 | 11,494,685 | 13,407,972 |
| 2. Work-Study | 55,230 | 52,113 | - | - | - | - | - | - | 55,230 | 52,113 | 107,343 |
| 3. Cooperative Education | 125,710 | - | 172,015 | 208,787 | - | - | - | - | 297,725 | 208,787 | 506,512 |
| 4. Equity Incentives | - | - | - | - | - | - | 1,500 | - | 1,500 | - | 1,500 |
| 5. Sex Bias - Elimination | - | - | - | - | - | - | 50,000 | - | 50,000 | - | 50,000 |
| 6. Special Services - Homemakers | - | - | 20,480 | 33,194 | - | - | - | - | 20,480 | 33,194 | 53,674 |
| Subtotal - Subpart 2 | 1,166,866 | 3,879,645 | 940,623 | 6,224,878 | 179,233 | 1,684,256 | 51,500 | - | 2,338,222 | 11,788,779 | 14,127,001 |
| 7. Administration | 48,510 | 151,500 | 96,472 | 228,344 | - | - | 130,365 | 134,903 | 275,347 | 514,747 | 790,094 |
| Total - Subpart 2 | 1,215,376 | 4,031,145 | 1,037,095 | 6,453,222 | 179,233 | 1,684,256 | 181,865 | 134,903 | 2,613,569 | 12,303,526 | 14,917,095 |
| SUBPART 3 - PROGRAM IMPROVEMENT & SUPPORTIVE SERVICES | | | | | | | | | | | |
| Guidance & Counseling | | | | | | | | | | | |
| Handicapped | - | * | * | * | - | - | - | - | * | * | * |
| Disadvantaged | 40,155 | * | * | * | - | - | - | - | * | * | * |
| Others | 344,955 | * | * | * | - | - | 29,788 | - | * | * | * |
| 1. Guidance & Counseling - Total | 385,110 | 369,543 | 156,239 | 62,246 | - | - | 29,788 | - | 571,137 | 431,789 | 1,002,926 |
| 2. Research, Exemplary, Curriculum Development | - | - | - | - | - | - | 43,000 | - | 43,000 | - | 43,000 |
| 3. Personnel Development | 50,901 | 27,736 | 30,908 | - | - | - | 65,061 | 41,034 | 146,870 | 68,770 | 215,640 |
| Subtotal - Subpart 3 | 436,011 | 397,279 | 187,147 | 62,246 | - | - | 137,849 | 41,034 | 761,007 | 500,559 | 1,261,566 |
| 4. Administration | 12,125 | - | 24,118 | - | - | - | 32,591 | - | 68,834 | - | 68,834 |
| Total - Subpart 3 | 448,136 | 397,279 | 211,265 | 62,246 | - | - | 170,440 | 41,034 | 829,841 | 500,559 | 1,330,400 |
| SUBPART 4 - SPECIAL PROGRAMS | 114,661 | - | - | - | - | - | - | - | 114,661 | - | 114,661 |
| SUBPART 5 - CONSUMER & HOMEMAKING | | | | | | | | | | | |
| Educational Programs | | | | | | | | | | | |
| Disadvantaged | 62,264 | 436,712 | - | - | 23,337 | - | - | - | 85,601 | 436,712 | 522,313 |
| Others | 84,778 | 743,591 | - | - | - | 21,000 | - | - | 84,778 | 764,591 | 849,369 |
| 1. Educ. Programs - Total | 147,042 | 1,180,303 | - | - | 23,337 | 21,000 | - | - | 170,379 | 1,201,303 | 1,371,682 |
| 2. Ancillary Services | 21,239 | - | - | - | - | - | - | - | 21,239 | - | 21,239 |
| Total - Subpart 5 | 168,281 | 1,180,303 | - | - | 23,337 | 21,000 | - | - | 191,618 | 1,201,303 | 1,392,921 |
| SECTION 102d - ADMINISTRATION | - | - | - | - | - | - | 20,915 | - | 20,915 | - | 20,915 |
| TOTAL | 1,946,454 | 5,608,727 | 1,248,360 | 6,515,468 | 202,570 | 1,705,256 | 373,220 | 175,937 | 3,770,604 | 14,005,388 | 17,775,992 |

*Included in Total.
**Included in Postsecondary

## STATUS OF ENROLLMENT BY SEX CHARACTERISTIC

The most commonly used set of data to measure progress in sex equity has been male/female enrollment figures, particularly the changes occurring in those programs traditionally and heavily populated by one sex. For the Community Colleges, comparisons of 1976 and 1979 systemwide data based on analysis by OSDVE and the University of Hawaii's Industrial Relations Center indicate the following:

- Total enrollments have increased by 1.2 percent from 11,483 to 11,620 students.
- The proportion of female enrollments increased by 9 percent; male enrollments decreased by 4 percent.
- Of the total male enrollments, the concentration of male students in nontraditional, mixed, and traditional programs remained essentially the same.
- The concentration of females in programs traditional to their sex decreased 10 percentage points. Increased enrollments of females occurred in mixed programs from 42.4 percent in 1976 to 49.2 percent in 1979. In programs nontraditional to their sex, the increase was 116 percent, from 3.1 percent in 1976 to 6.0 percent in 1979.

For the Department of Education, comparisons of 1976 and 1979 data, based on VEDS and other data gathering systems within the department, indicate the following:

- Total female vocational education enrollment for females has been consistently higher than the male enrollment, averaging 59.5 percent for the 4-year period.
- Female enrollment in technical programs increased from 1 percent in 1976 to 4 percent of the total enrollment in 1979. In trades and industry, overall female enrollment increased from 3 percent in 1976 to 7 percent of the total enrollment in 1977; and in agriculture, the female enrollment in proportion to male enrollment for the same time periods increased from 14 percent to 24 percent.
- Male enrollment in proportion to female enrollment in office education decreased by 1 percent. For the programs with fairly balanced enrollments (e.g. distributive, consumer homemaking, and occupational preparation), the male/female ratio remains essentially the same.

Other Factors for Consideration:

Within the Community College system, efforts are currently underway to develop a systematic systemwide sex equity plan which will include feasible strategies to reduce sex bias and stereotyping at this postsecondary level. The plan which is expected to be approved in the Fall, 1981, will provide considerable data and information for the formulation of objectives for FY 83-84.

With respect to the Department of Education, the systemwide plan currently in operation calls for annual EGO Conferences and follow-up sessions. In accordance with this plan, personnel from approximately seven high schools receive this training each year. By 1983-84, the balance of 10 to 11 schools will need to be served through this program.

The above information provides only a general overview. More specific details by programs within both operating agencies are available from OSDVE.

Table 10
VOCATIONAL EDUCATION ENROLLMENT BY SEX IN ALL COMMUNITY COLLEGES
University of Hawaii System · 1976 - 1980

| PROGRAM | Academic Year | TOTAL | Male / Female | % Female |
|---|---|---|---|---|
| ENROLLMENT: ALL COLLEGES | 1976-77 | 28,924 | 15,962 / 12,962 | 45% |
| | 1977-78 | 28,278 | 15,065 / 13,213 | 47% |
| | 1978-79 | 28,009 | 14,491 / 13,518 | 48% |
| | 1979-80 | 27,939 | 14,114 / 13,817 | 49% |
| VOCATIONAL EDUCATION ENROLLMENT | 1976-77 | 11,483 | 6,768 / 4,715 | 41% |
| | 1977-78 | 11,550 | 6,635 / 4,915 | 43% |
| | 1978-79 | 11,564 | 6,591 / 4,973 | 43% |
| | 1979-80 | 11,620 | 6,479 / 5,141 | 44% |
| BUSINESS | 1976-77 | 2799 | 1563 / 1236 | 44% |
| | 1977-78 | 2726 | 1436 / 1288 | 47% |
| | 1978-79 | 2803 | 1338 / 1465 | 52% |
| | 1979-80 | 3068 | 1422 / 1646 | 54% |
| SECRETARIAL AND RELATED | 1976-77 | 1842 | 76 / 1766 | 96% |
| | 1977-78 | 1839 | 83 / 1756 | 95% |
| | 1978-79 | 1673 | 50 / 1623 | 97% |
| | 1979-80 | 1565 | 34 / 1531 | 98% |
| HEALTH SERVICE | 1976-77 | 563 | 64 / 499 | 89% |
| | 1977-78 | 582 | 85 / 497 | 85% |
| | 1978-79 | 534 | 95 / 439 | 82% |
| | 1979-80 | 535 | 91 / 444 | 83% |
| HOTEL/FOOD SERVICE | 1976-77 | 657 | 461 / 196 | 30% |
| | 1977-78 | 739 | 528 / 211 | 29% |
| | 1978-79 | 811 | 565 / 246 | 30% |
| | 1979-80 | 803 | 549 / 254 | 32% |
| PUBLIC SERVICE | 1976-77 | 1565 | 1054 / 511 | 33% |
| | 1977-78 | 1581 | 989 / 592 | 37% |
| | 1978-79 | 1520 | 942 / 578 | 38% |
| | 1979-80 | 1354 | 774 / 580 | 43% |
| TRADES AND TECHNOLOGY | 1976-77 | 4057 | 3550 / 507 | 12% |
| | 1977-78 | 4083 | 3512 / 571 | 14% |
| | 1978-79 | 4223 | 3601 / 622 | 15% |
| | 1979-80 | 4295 | 3609 / 686 | 16% |

Source: Report 2541, Unduplicated Headcount of Students Served by the Community Colleges Office of the Chancellor for Community Colleges, University of Hawaii

Table II

VOCATIONAL EDUCATION PROGRAM ENROLLMENT BY SEX IN THE

DEPARTMENT OF EDUCATION SCHOOLS

State of Hawaii 1976 - 80

| PROGRAM | School Year | TOTAL | Male / Female | % FEMALE |
|---|---|---|---|---|
| AGRICULTURE | 1976-77 | 2,943 | 2538 / 405 | 14% |
| | 1977-78 | 2,449 | 1891 / 558 | 23% |
| | 1978-79 | 2,630 | 1948 / 682 | 26% |
| | 1979-80 | 2,158 | 1633 / 525 | 24% |
| DISTRIBUTIVE/GEN. MERCH. (Bus. Law; Coop Distr. Ed; Bus. Princpl. Mgmt; Salesmanship; Adver.; etc. | 1976-77 | 1,761 | 660 / 1101 | 63% |
| | 1977-78 | 1,783 | 583 / 1200 | 67% |
| | 1978-79 | 2,041 | 705 / 1336 | 65% |
| | 1979-80 | 1,720 | 589 / 1131 | 66% |
| CONSUMER/ HOMEMAKING | 1976-77 | 21,410 | 7769 / 13641 | 64% |
| | 1977-78 | 19,095 | 6186 / 12909 | 68% |
| | 1978-79 | 13,016 | 3474 / 9542 | 73% |
| | 1979-80 | 12,238 | 3372 / 8866 | 72% |
| OCCUPATIONAL PREPARATION/ Home Econo. | 1976-77 | 1,208 | 413 / 795 | 66% |
| | 1977-78 | 1,312 | 554 / 758 | 58% |
| | 1978-79 | 2,067 | 870 / 1197 | 58% |
| | 1979-80 | 2,161 | 1031 / 1130 | 52% |
| OFFICE EDUCATION | 1976-77 | 12,034 | 5071 / 6963 | 58% |
| | 1977-78 | 10,638 | 1903 / 8735 | 82% |
| | 1978-79 | 11,633 | 2084 / 9549 | 82% |
| | 1979-80 | 12,110 | 2105 / 10005 | 83% |
| TECHNICAL | 1976-77 | 520 | 514 / 6 | 1% |
| | 1977-78 | 678 | 672 / 6 | 1% |
| | 1978-79 | 705 | 692 / 13 | 2% |
| | 1979-80 | 505 | 433 / 22 | 4% |
| TRADES AND INDUSTRY | 1976-77 | 3,364 | 3267 / 97 | 3% |
| | 1977-78 | 5,211 | 4905 / 306 | 6% |
| | 1978-79 | 4,581 | 4268 / 313 | 7% |
| | 1979-80 | 4,478 | 4152 / 326 | 7% |

NOTE: Program enrollment totals are duplicated headcounts based on course enrollment records. Fluctuations in enrollment figures from 1976 to 1980 are due to variations in reporting procedures which are in the process of being standardized.

Source for 1976-77 to 1978-79: OE 346-3 Report (Adult supplemental programs excuded), Department of Education; and calculations in those respective years by the Occupational Development Section, Department of Education.
Source for 1979-80: Vocational Education Data System (VEDS), Office of the State Director for Vocational Education.

SECTION 10.0

TABLE 12

O.C.R. REVIEW OF SELECTED SCHOOLS
AND COLLEGES FOR 1980-81: DISTRIBUTION
OF SEX AND ETHNIC POPULATIONS

| Sex | TOTAL STATE | District: Honolulu (Kalani) | Leeward (Waianae) | Central (Radford) | Hawaii (Lapahoehoe) | Kauai (Kauai) | Maui (Molokai) | Windward (Kahuku) | Colleges: Kapiolani & Honolulu C.C. |
|---|---|---|---|---|---|---|---|---|---|
| Female | 49.75 | 48.9 | 48.6 | 49.0 | 49.8 | 53.6 | 49.1 | 49.0 | 50.25 |
| Male | 50.25 | 51.1 | 51.4 | 51.0 | 50.2 | 46.4 | 50.9 | 51.0 | 49.75 |
| Ethnicity | | | | | | | | | |
| Black | 1.1 | 0 | 0.4 | 2.10 | 0.2 | NA | 0 | 0.35 | 1.4 |
| Caucasian | 26.2 | 31.2 | 16.3 | 41.30 | 24.6 | 24.3 | 6.7 | 33.00 | 30.5 |
| Chinese | 4.2 | 11.1 | 2.5 | 3.15 | 0.6 | NA | 0.2 | 2.00 | 5.6 |
| Filipino | 9.7 | 0.9 | 11.8 | 9.85 | 15.7 | 21.9 | 27.5 | 12.80 | 10.2 |
| Hawaiian | 1.1 | 11.4 | 4.1 | 0.25 | 0.9 | 14.0 | 3.9 | 0.80 | 0.9 |
| Part Hwn. | 18.7 | | 43.4 | 9.10 | 25.0 | | 46.7 | 21.90 | 14.4 |
| Japanese | 25.2 | 33.8 | 7.5 | 22.80 | 19.8 | 30.4 | 9.8 | 14.00 | 24.6 |
| Korean | 1.1 | 3.5 | 0.4 | 0.40 | 0.1 | NA | 0.2 | 0.80 | 1.5 |
| P. Rican | 0.6 | 0 | 0.7 | 0.85 | 1.4 | NA | 0 | 0.55 | 0.6 |
| Samoan | 0.9 | 0.1 | 0.5 | 1.50 | 0.1 | NA | 0.1 | 2.60 | 1.0 |
| Mixed | 10.2 | 6.4 | 8.6 | 8.00 | 10.9 | NA | 4.6 | 9.00 | 8.2 |
| Other | 1.0 | 0.4 | 4.1 | 0.65 | 0.4 | 9.4 | 0.1 | 2.35 | 1.4 |

Source: "Vocational Education Civil Rights Compliance Report", July 1981

DEPARTMENT OF EDUCATION - IN-SERVICE ACTIVITIES

January to December 1978

| | Training Activities | Location |
|---|---|---|
| 1. | EDCI 583I, PICD - New Trends and Developments in Electronic Technology | Farrington High |
| 2. | Workshop Practicum - IACP World of Construction | Hilo High |
| 3. | " " " " " " | " " |
| 4. | EDCI 583 - Consumer Education | Univ. of Hawaii |
| 5. | EDCI 470 - Instructional Development System and Practicum | " " |
| 6. | Workshop Practicum - Office Education | Kapiolani C.C. |
| 7. | Workshop Practicum - Beginning Typing | Kapiolani C.C. |
| 8. | EDCI 583S - Career Development Continuum | Hilo Union<br>Waipahu High<br>Castle High<br>McKinley High<br>Red Hill<br>Baldwin High<br>Kauai High |
| 9. | Institute - Career Guidance | Oahu (3 times)<br>Kauai<br>Maui<br>Hilo |
| 10. | EDCI 583W - Training Career Development Continuum Cadre | McKinley High (2) |
| 11. | EDCI 583 - New Trends in Development in Agriculture | Central Inter. & other places |
| 12. | Workshop - Basic Practical Arts | Moanalua Inter. |
| 13. | EDCI 583P, PICD - Voc.-Tech. Education (PIP) | McKinley High<br>Kauai High |
| 14. | EDCI 583Q, PICD - " " " (IV) | McKinley High<br>Kauai High<br>Lihikai |
| 15. | EDCI 583R, PICD - " " " (OS) | McKinley High<br>Lihikai |

January to December 1979

| | | |
|---|---|---|
| 1. | Workshop - Heat Treating and Metal Casting | Leilehua High |
| 2. | Workshop - IACP World of Manufacturing | Kailua High |
| 3. | EDCI 589G - New Direction in Home Economics - Food Science | Kalakaua Inter. |
| 4. | EDCI 583S, PICD - Consumer Energy Education | University High |
| 5. | Workshop - Metric for Home Economic Teachers | Kalaheo High |
| 6. | " " " " " " | Kawananakoa Inter. |
| 7. | " " " " " " | Maui High |
| 8. | EDCI 583 - Practicum in Curriculum Development | Kapiolani C.C. |
| 9. | Workshop - Century 21 Shorthand | Kapiolani C.C. |
| 10. | EDCI 582F, PICD - Career Planning and Job Placement | McKinley High |

| | | |
|---|---|---|
| 11. | EDCI 583U, PICD - Career Guidance as a Component to Career Education | U.H. (Manoa) |
| 12. | EDCI 583R, PICD - Hawaii Career Development Continuum | Castle High<br>Pearl City High<br>Kaiulani Elem.<br>Baldwin High<br>Wilcox<br>Waipahu High<br>Hilo Union |
| 13. | EDCI 589F - Advanced Practicum in Hawaii Career Development Continuum | Castle High (2) |
| 14. | Institute - Career Guidance | Honolulu Businesses (2)<br>Kauai "<br>Maui "<br>Hawaii " |
| 15. | EDCI 583M, PICD - Voc.-Tech. Education (PIP) | McKinley High |
| 16. | EDCI 583N, PICD - " " " (IV) | " " |
| 17. | EDCI 583 O-P, PICD - " " " (OS) | " " |
| 18. | Workshop - Small Engine Repairs and Maintenance | Lahainaluna High |
| 19. | EDCI 589H, PICD - Basic Practical Arts | Waiakea Inter. |
| 20. | EDCI 589H, PICD - " " " | Waipahu Inter. |
| 21. | EDCI 582, PICD - Graphic Arts Technology | Farrington High |

January to August 1980

| | | |
|---|---|---|
| 1. | EDCI 583R, PICD - World of Construction | |
| 2. | Workshop - Photography | |
| 3. | Workshop - Solving Power Tool Problems in the School Shop | |
| 4. | Seminar - Total Information Processing | |
| 5. | Workshop - Heat Pump/Solar Heater | |
| 6. | EDCI 572 - New Direction in Home Economics - Food Science | |
| 7. | EDCI 583W, PICD - Beginning Typing - Level II | |
| 8. | EDCI 583U, PICD - General Business | |
| 9. | EDCI 583D, PICD - Basic Practical Arts | Kauai |
| 10. | EDCI 583D, PICD - " " " | Hilo |
| 11. | EDCI 582D, PICD - Repair and Maintenance of Small Engines | |
| 12. | EDCI 583R, PICD - Foundation of Competency-Based Vocational Education | |

NOTE: EDCI 500 course series (with credits) are not applicable for graduate degree.

COMMUNITY COLLEGES - IN-SERVICE ACTIVITIES

1978-1979 (School Year)

| | Training Activities | Location |
|---|---|---|
| 1. | EDCI 401 - Sex Stereotyping and Vocational Education | Kauai C.C. |
| 2. | Workshop - "Improving Vocational Education Opportunities for Handicapped Students" | Leeward C.C. |
| 3. | Workshop - First Aid and CPR Training | Leeward C.C. |
| 4. | " " " " " " | Maui C.C. |
| 5. | " " " " " " | Windward C.C. |
| 6. | " " " " " " | Kauai C.C. |

1979-1980 (School Year)

| | | |
|---|---|---|
| 1. | Workshop - "Mainstreaming: Personalizing Vocational Instruction for Disabled Students" | Queen Kapiolani |
| 2. | " " | Maui C.C. |
| 3. | " " | Hawaii C.C. |
| 4. | " " | Kauai C.C. |

1980-1981 (School Year)

| | | |
|---|---|---|
| 1. | Seminar - Energy Conservation and Alternative Energy Development | Korean Studies Center |
| 2. | Workshop - Word Processing | Hawaii C.C. |
| 3. | Workshop - Competency-Based Curriculum | Honolulu C.C. |
| 4. | " " " " | Kauai C.C. |
| 5. | " " " " | Maui C.C. |
| 6. | Workshop - Delco Remy Carburetion for Auto Mechanic Teachers | Leeward C.C. |
| 7. | Workshop - Maintenance, Service and Repair of Automotive Diesel Engine for Auto Mechanic Teachers | Honolulu C.C. |

UNIVERSITY OF HAWAII:
COLLEGE OF EDUCATION-
IN-SERVICE ACTIVITIES

| | Course Offerings | School Years 1978-1979 | 1979-1980 | 1980-1981 |
|---|---|---|---|---|
| EDIE 300 | Industrial Crafts - Jewelry and Lapidary Processes | x* | x | x* |
| 301 | Industrial Crafts - Leather | x | x | x |
| 302 | Industrial Crafts - Plastics | x | | x |
| EDCI 346 | Methods of Instruction, Industrial Education | x** | x** | x |
| 347 | Organization and Management of Industrial Education | | x | x |
| 348 | Methods of Teaching Shorthand & Bookkeeping | x | x | x |
| 349 | Methods of Teaching Typing & General Business | x | x | x |
| 371 | Home Economics Education | x | x | x* |
| 399 | Directed Reading | x** | x | |
| EDIE 401 | Problems in Industrial Education | x | | x |
| 402 | Improvement of Instruction, Industrial Ed. | x | x | x |
| EDCI 416 | Tests and Measurements | | | x** |
| 437 | Curriculum Development, Industrial Ed. | x | x | x |
| 438 | Foundations of Vocational Education | x | x | x*** |
| 439 | Office Education | x | x | x |
| 460 | Distributive Education | x | x | x |
| 471 | Special Problems in Home Economics Ed. | | x | x |
| 491 | Vocational Education in Community Colleges | | | x |
| 492 | Community College and Higher Education | | | x |
| 590D | Community College | x* | x* | x* |
| 591D | Seminar for Interns | x* | x* | x* |
| 639 | Business Education Curriculum | | x | |
| 640B | Methods of Teaching Business Education | x | x | x |
| 640F | Seminar in Home Economics Education | | | x |
| 640G | Seminar in Industrial Education | | x | x |
| 640M | Interdisciplinary Education | x | x | |
| 649 | Theory & Practices in Cooperative Business Education | x | | x |
| 657 | Community Colleges | x | | |
| 699 | Directed Reading and/or Research | x*** | x**** | |
| 764 | Seminar in Industrial Education | x | x | x |

*Offered 2 times.
**Offered at Hawaii Community College
***Offered 2 times on Oahu and Hawaii C.C.
****Offered 3 times.

NOV 13 1981

ERIC Clearinghouse for Junior Colleges
96 Powell Library Building
University of California
Los Angeles, California 90024

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